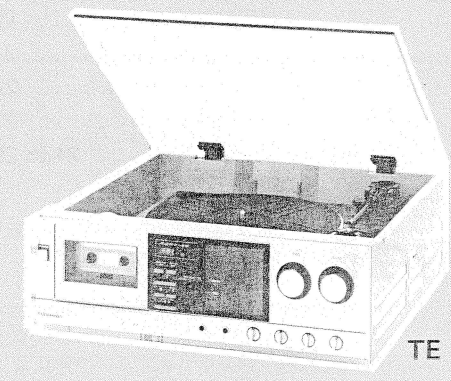
SERVICE DATA
FILE NO. 140-129

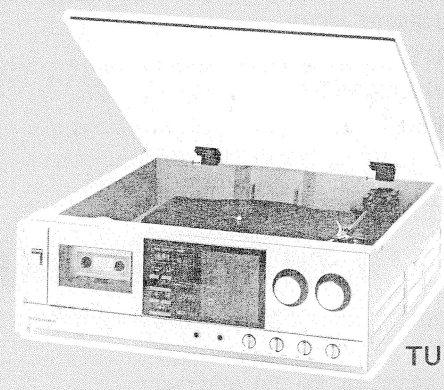
TOSHIBA

STEREO MUSIC CENTRE

SM-1000L



TE MODEL



TU,AY,TI MODEL

SPECIFICATION

■ General Data

Power supply:	220V ~, 50 Hz (for European countries except U.K.) 240V ~, 50 Hz (for Australia & United Kingdom)
Power consumption:	55W
Dimensions:	W420 x H135 x D422 mm
Weight:	7.8 kg

■ Amplifier

Rated continuous power:	7.6W + 7.6W, 10% THD at 8 ohms (1 kHz, both channels driven)
Music power:	10.6W + 10.6W, 10% THD at 8 ohms (1 kHz, both channels driven)
Frequency response:	40 Hz – 20 kHz
Signal to noise radio:	50 dB (PHONO A Network)
Headphones:	Recommended impedance of headphones more than 8 ohms
Connecting Speaker Impedance:	over 8 ohms

■ Tuner

Frequency range:	FM: 88 – 108 MHz MW: 525 – 1605 kHz LW: 145 – 355 kHz

FM Band

Aerial:	External aerial (75 ohm)
Usable sensitivity:	Mono: 13 μV (S/N = 26 dB 40 kHz deviation)
Signal to noise ratio:	Mono: 40 dB (40 kHz deviation at 1 kHz)
Distortion:	3% at 1 kHz (STEREO)
AM suppression:	33 dB
Separation:	30 dB at 1 kHz

AM Band

Aerial:	Loop Antenna
Usable sensitivity:	50 μV/m (MW), 900 μV/m (LW)

■ Cassette Recorder

Track system:	4 track, 2 channel (stereophonic)
Tape speed:	4.75 cm/sec.
Recording and Erasing System:	AC Bias (85 kHz), AC Erase
Heads:	(Record/Playback) Permalloy head, (Erase) Ferrite head
Signal to noise ratio:	Chrome tape 50 dB
Frequency response: (–20 dB input)	(Chrome tape 63 Hz – 12.5 kHz ±3 dB (Normal tape) 63 Hz – 10 kHz ±3 dB
Wow & Flutter:	0.15% (WTD RMS)

■ Turntable

Drive system:	Belt drive
Motor:	DC motor, Electric governor
Truntable platter:	26.5 cm with rubber matt
Speed:	Two speed 33-1/3 & 45 rpm
Wow & Flutter:	Less than 0.2% (WRMS)
Signal to noise ratio:	More than 55 dB
Cartridge:	C-292M
Stylus:	N-292D

Specifications are subject to change without notice.

TE, TU, AY, TI

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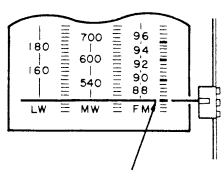
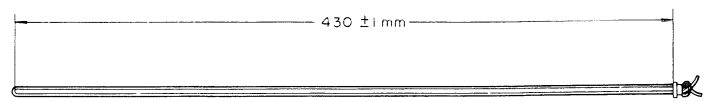
1. DIAL CORD RESTRINGING

1. Set the variable capacitor to the minimum capacitance. (fully clockwise position)
2. Mount a spring to the drum and wind the dial cord in the numerical sequence as shown in the direction of arrows.
3. Mount the dial pointer to the dial cord in this position where the tuning shaft have been wound up fully counterclockwise.



Dial pointer attachment point.



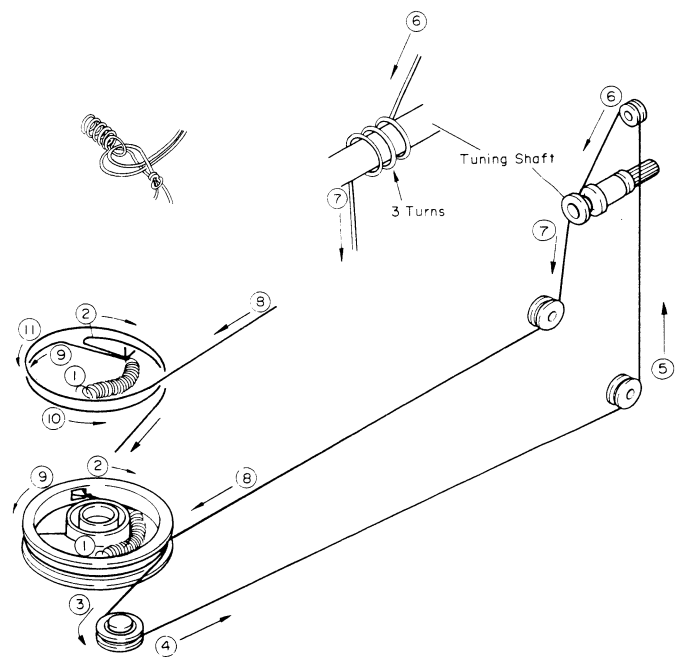


Figure 1

2. OPERATING CONTROLS

European countries except U.K. & R.O.I.

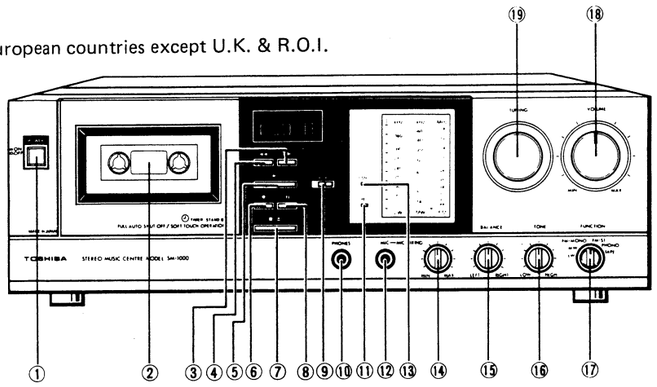


Figure 2

U.K., R.O.I. & Australia

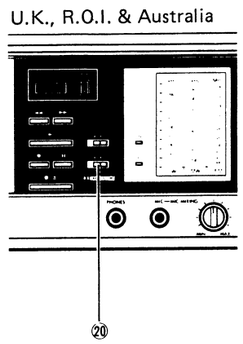


Figure 3

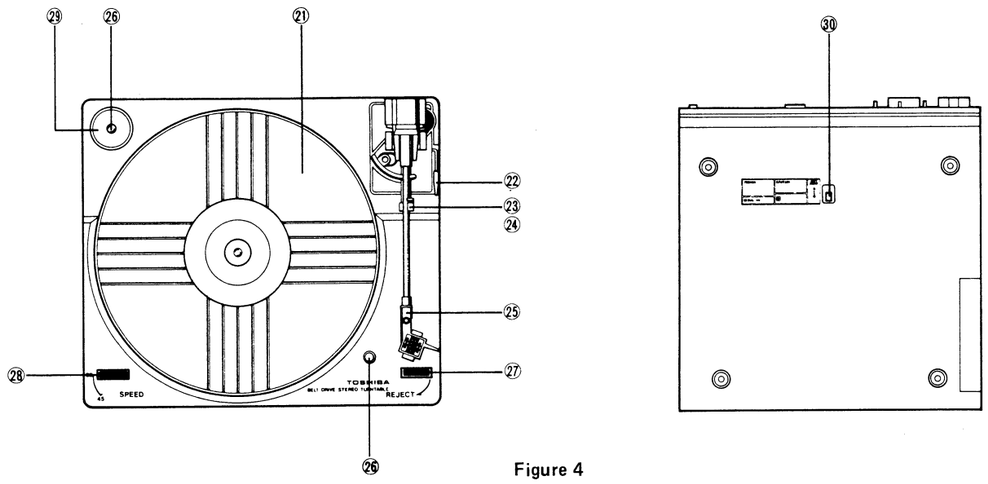


Figure 4

① **Power switch**
Depress this button once to turn the power on (⏤) and once more to turn the power off again (⏍).

Note: Turn the volume knob to the MIN position before turning the power on.

② **Cassette door**
Close by pressing against the centre.

③ **▶▶ Fast Forward/Cue button**
Press this button to wind the tape rapidly forward. If this button is pressed during playback, the tape will be wound rapidly forward only as long as you hold the button down and the deck will return to the playback mode automatically when the button is released.

④ **◀◀ Rewind/Review button**
Press this button to wind the tape rapidly backward. If this button is pressed during playback, the tape will be wound rapidly backward only as long as you hold the button down and the deck will return to the playback mode automatically when the button is released.

⑤ **▶ Play button**
Press this button to play back a cassette.

⑥ **● Record button**
Press this button to begin recording.

⑦ **■/⏏ Stop/Eject button**
Press this button to stop tape transport during any of the tape transport modes. Press this button again to open the cassette door after the tape has been stopped.

⑧ **❚❚ Pause button**
Press this button to temporarily stop tape transport during the play and record modes. Press again to continue playback or recording.

⑨ **Tape Selector Switch**
Set this switch to the correct position for the type of tape used.

⑩ **Headphone jack**
Plug headphones into this jack for private listening

⑪ **Recording indicator**
This indicator lights up during recording operations.

⑫ **Mic jack**
This jack is for cassette tape recording and mic mixing operations.

⑬ **FM stereo indicator**
This lights up when an FM stereo broadcast is received.

⑭ **Mic mixing volume knob**
This adjust the volume from the microphone during mic mixing operations. This knob should always be, in the 'min' setting at all other times.

⑮ **Balance knob**
Turn to the left to shift sound balance to the left and to the right for the opposite effect.

⑯ **Tone knob**
Turn clockwise to emphasize the high range and counterclockwise for the opposite effect.

⑰ **Function selector**
Use this to select the audio source you wish to hear.

LW:	for LW radio broadcasts
MW:	for MW radio broadcasts
FM-MONO:	for FM monb broadcasts
FM-STEREO:	for FM stereo broadcasts
PHONO:	when using the turntable
TAPE:	when using the cassette deck

⑱ **Volume knob**
This controls the volume level of the left and right channels.

⑲ **Tuning knob**
Use this knob to tune in a radio broadcast.

⑳ **Dolby* NR switch (U.K., R.O.I. & Australia)**
Switch to the ON position to make a recording using Dolby NR or to play back a Dolby encoded tape. This noise reduction system reduces annoying tape hiss. Leave this switch in the OFF position when Dolby NR is not being used.

㉑ **Turntable platter** ㉒ **Cueing lever** ㉓ **Arm holder**

㉔ **Arm rest** ㉕ **Tonearm** ㉖ **Transit screws**

㉗ **Reject lever** ㉘ **Speed selector** ㉙ **EP adaptor**

㉚ **Beat Canceller switch**
Set this switch to the position that gives the best result (● or ○) if beat interference is heard on recordings made from AM broadcasts.

* Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trademarkes of Dolby Laboratories Licensing Corporation.

■ SETTING UP PROCEDURE AND CONNECTIONS

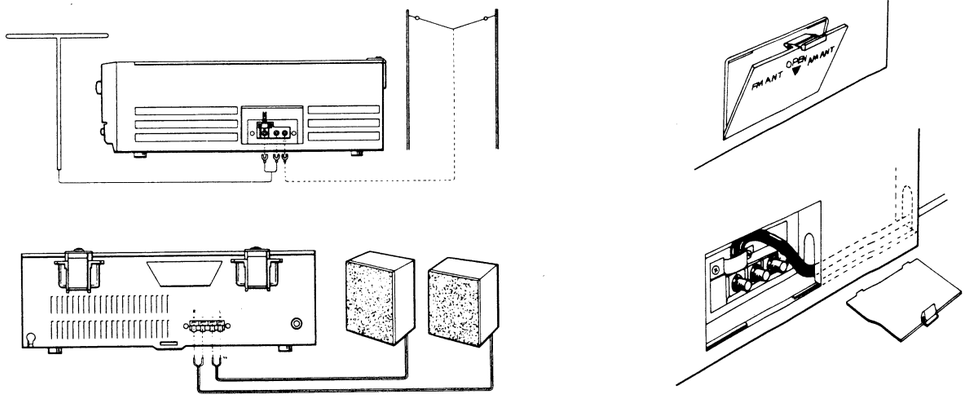


Figure 5

Do not connect this unit to the wall socket until all connections have been made.

1 Locating the unit
In order to obtain optimum performance from this unit, be sure to place it in:
A flat place not subject to vibrations.
A place not exposed to direct sunlight, heat, humidity or dust.

2. Setting up the turntable
Place the turntable sheet and make sure that the turntable sheet has not been placed off-centre.
Loosen the transit screws ㉖ by turning them counterclockwise until the screws are free.
Place the tonearm in the arm rest and rotate the turntable platter clockwise several times by hand to verify that nothing has been damaged during shipment.

3. Connecting the speakers
Connect the speaker cord from the speakers to the speaker outputs on the back of the cabinet being sure right and left are correctly connected.

4. Antenna connection(see Fig. 5)
The FM Antenna terminal of this set is only for 75Ω.
For best reception always install an outdoor FM antenna. An exclusive high directivity, high sensitivity outdoor FM antenna is necessary.
For best result, connect the antenna to the tuner with coaxial cable as short and thick as possible.

Note for AM: It is recommended that you set up an outdoor AM aerial (see Fig. 4) if you live in an area where signal strength is low.

3. DISASSEMBLY INSTRUCTIONS

DUST COVER REMOVAL (with hinges)

1. Open the dust cover and lift it upward in the arrow direction Ⓐ. (See Figure 6)

PLAYER ASSEMBLY REMOVAL

1. Remove two screws Ⓑ (5ϕ x 28mm) and the player assemlby can be removed. (See Figure 7)
2. Since the loosened screw is idle, lift up the player unit to remove it. (See Figure 8)
3. Since the loosened screw is idle, hold up the screw with fingers to remove it. (See Figure 9)

Note: Take care of the motor lead and the phono pin jack connected with the main P.C. Board. When removing then, be sure to connect properly.

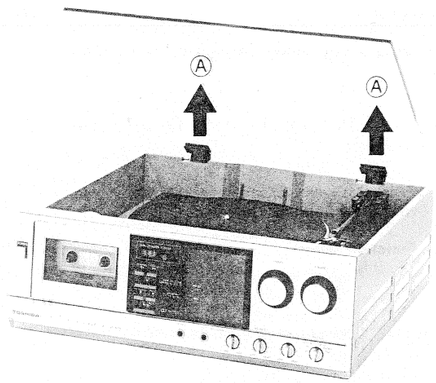


Figure 6

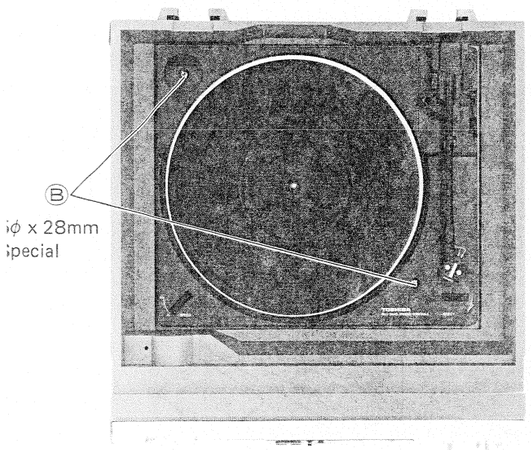


Figure 7

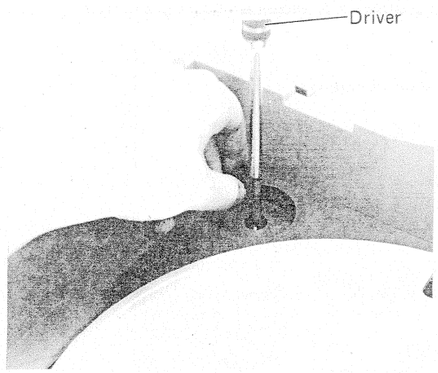


Figure 8

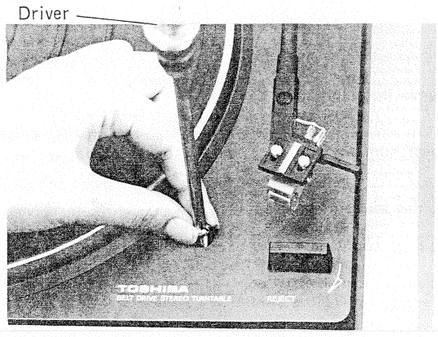


Figure 9

CASSETTE COVER REMOVAL

1. Push the eject button to open the cassette cover.
2. Press the top and bottom of cassette cover with fingers, and upward in direction of the arrow Ⓒ. Then the cassette cover can be removed. (See Figure 10)

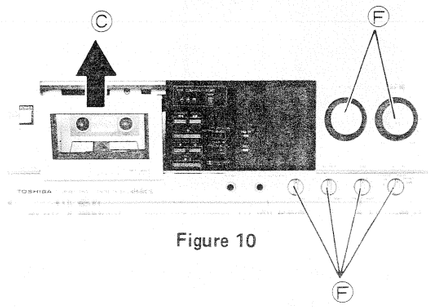


Figure 10

FRONT PANEL ASSEMBLY REMOVAL (with Cassette Mechanism Assembly)

1. Pull out six knobs Ⓕ. (See Figure 10)
2. Remove six screws Ⓖ (3ϕ x 10 mm) and Ⓗ (3ϕ x12 mm), and the front panel can be removed from unit. (See Figure 12 and 13)

Note: It is easier to install the front panel putting the unit facing the bottom side of it upward.

BOTTOM PLATE REMOVAL

1. Remove seven screws Ⓓ (3ϕ x 16 mm) and Ⓔ (3ϕ x 10 mm), and the bottom plate can be removed from unit. (See Figure 11)

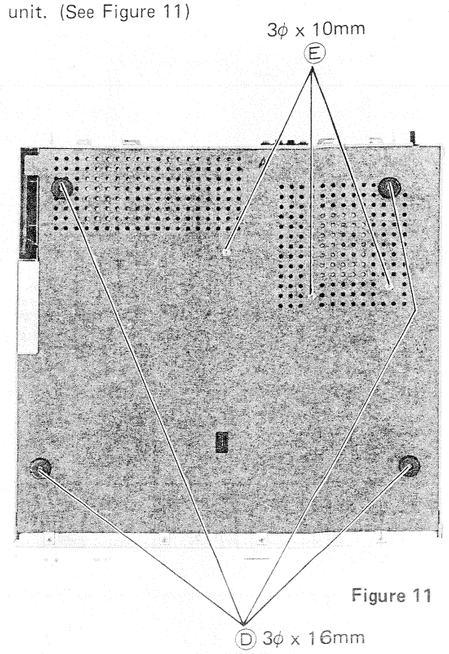


Figure 11

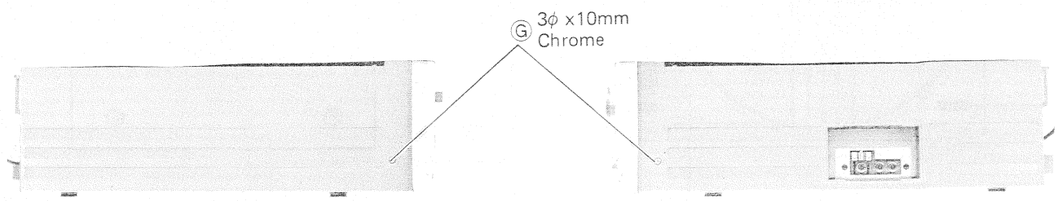


Figure 12

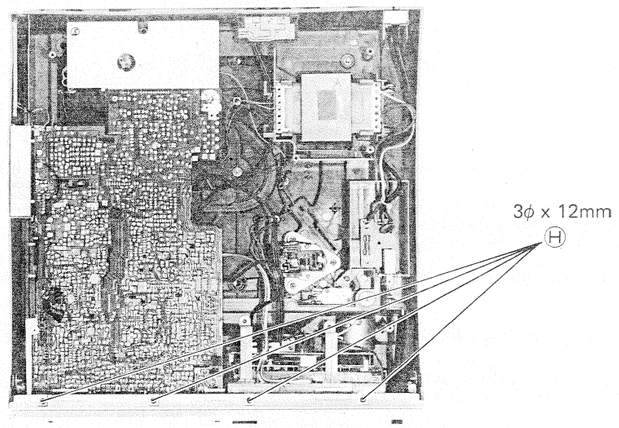


Figure 13

CASSETTE MECHANISM ASSEMBLY REMOVAL

1. Remove the cassette cover. (See Figure 10)
2. Remove one screw Ⓘ (2.6ϕ x 8 mm) and the cassette mechanism assembly can be removed from front panel. (See Figure 14)

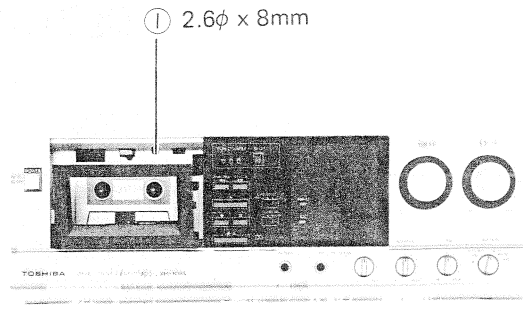


Figure 14

MAIN P.C. BOARD REMOVAL

1. Remove two screws Ⓙ (3ϕ x 10mm). (See Figure 15)
2. Unsolder the AM loop antenna Ⓚ to remove the main P.C. Board from the unit. (See Figure 15)

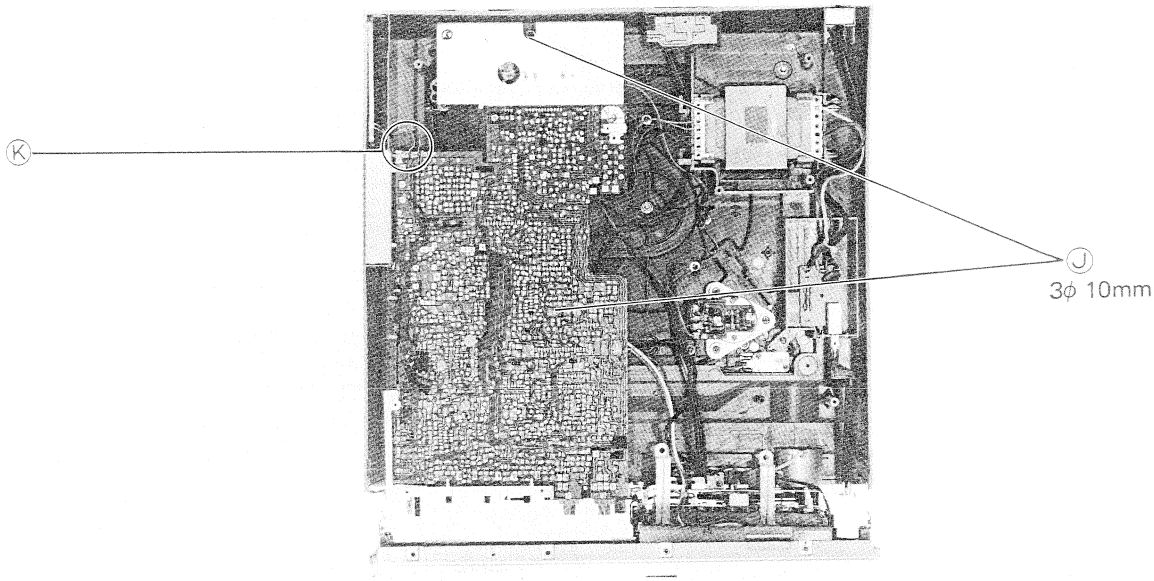


Figure 15

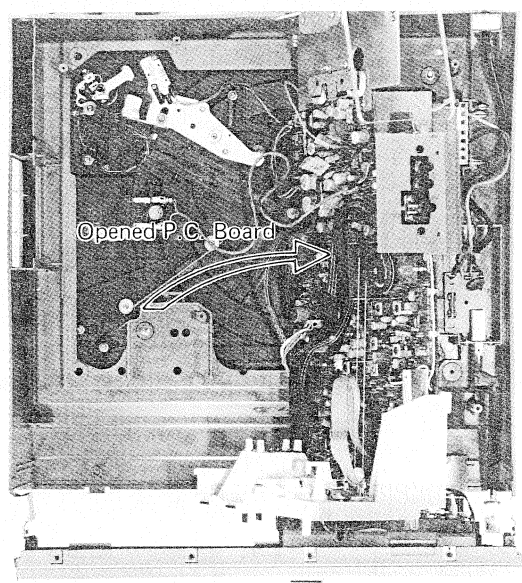


Figure 16

4. BLOCK DIAGRAM

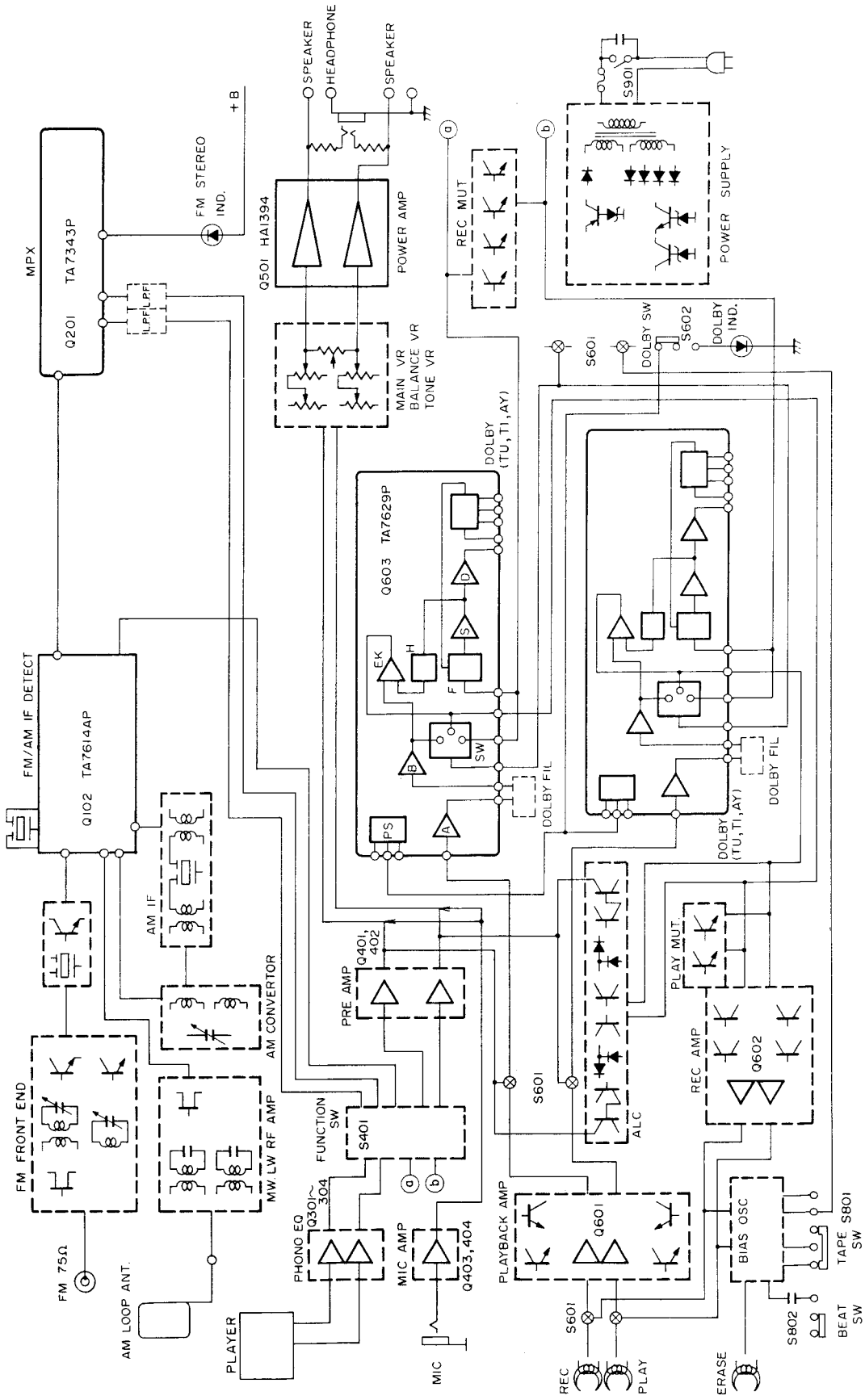


Figure 17

5. ADJUSTMENTS

ALIGNMENT LOCATIONS

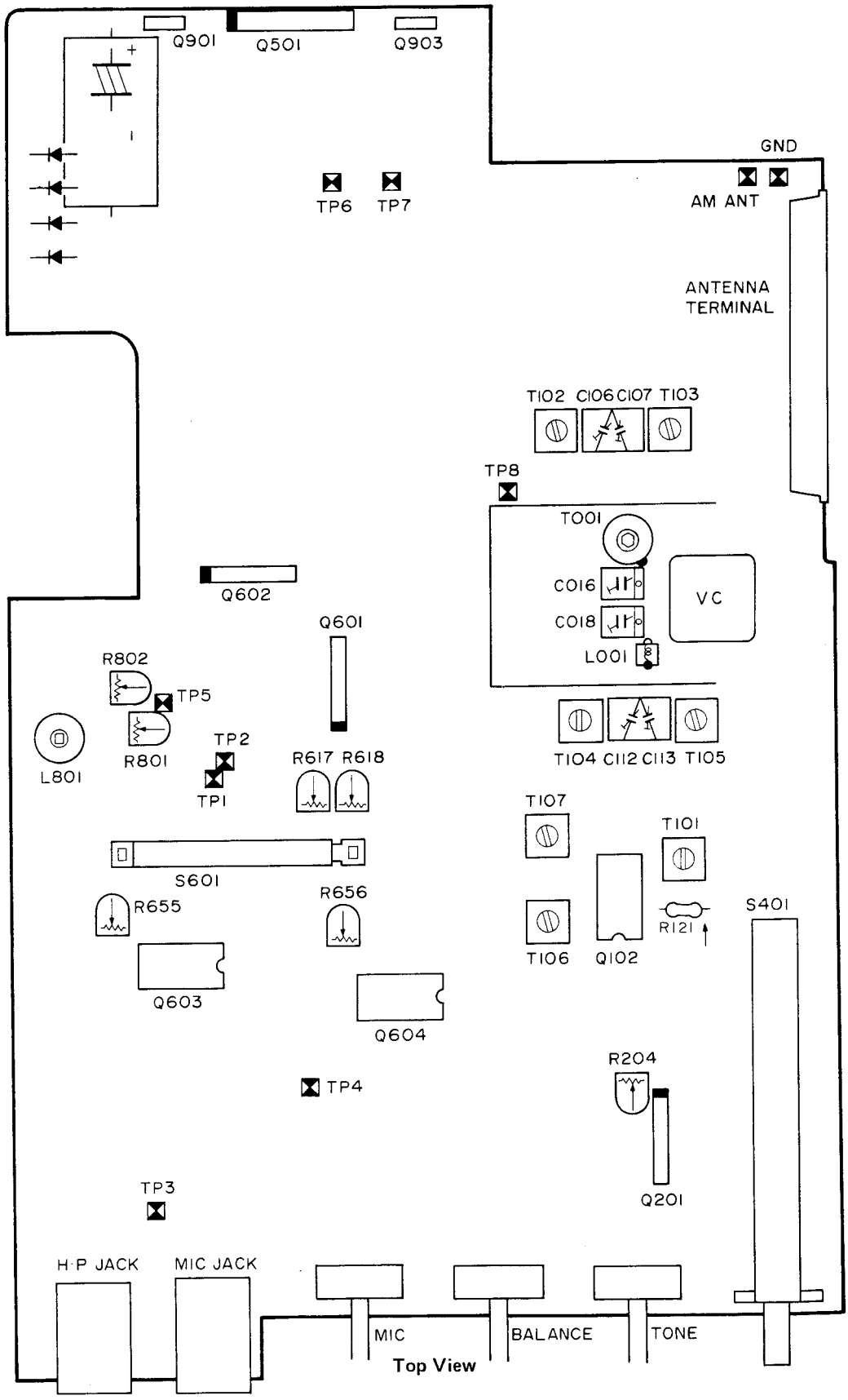


Figure 18

Test equipments/Tools required

1. Signal generator
2. Sweep generator
3. Test Loop antenna
4. VTVM
5. Adjusting screwdriver
6. Adjusting bar
7. Oscilloscope

IF ADJUSTMENT

Step	Adjustment	Remarks
IF Response	T106, T107	Adjust for scope pattern with specified marker (460 kHz) as illustrated in Figure 16.

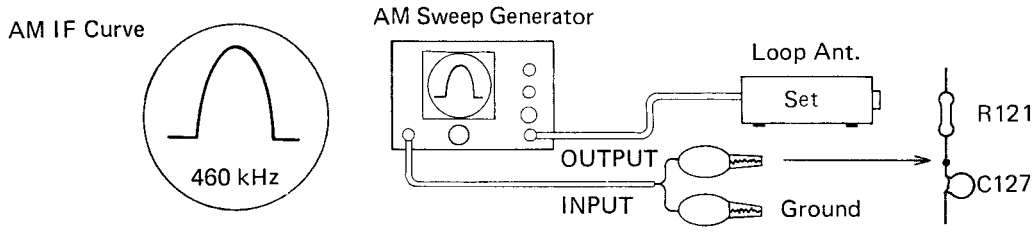


Figure 19

FREQUENCY COVERAGE AND TRACKING ADJUSTMENT MW (LW)

Step	Adjusting Circuit	Connection		SG Frequency	Position of Tuning Dial	Adjust-ment	VTVM
		Input	Output				
1	OSC (Frequency Coverage	Connect signal generator to test loop.	Connect VTVM to Output terminal.	515 kHz (142 kHz) 400 Hz 30% MOD.	Frequency minimum position (142 kHz)	T104 (T105)	Maximum
2				1650 kHz (380 kHz) 400 Hz 30% MOD.	Frequency maximum position 1650 kHz (380 kHz signal	C112 (C113)	
Repeat steps 1 and 2.							
3	OSC (Frequency Coverage)	Connect signal generator to test loop.	Connect VTVM to Output terminal.	600 kHz (180 kHz) 400 Hz 30% MOD.	Tune to 600 kHz (180 kHz signal		Adjust for no scale error.
4				1400 kHz (360 kHz) 400 Hz 30% MOD.	Tune to 1400 kHz (360 kHz) signal		
Repeat steps 3 and 4. If any error is present, repeat steps from 1 to 4.							
5	ANT (Tracking)	Connect signal generator to test loop.	Connect VTVM to Output terminal.	600 kHz (180 kHz) 400 Hz 30% MOD.	Tune to 600 kHz (180 kHz) signal	T102 (MW) (T103) (LW)	Maximum
6				1400 kHz (360 kHz) 400 Hz 30% MOD.	Tune to 1400 kHz 360 kHz) signal	C106 (C107)	
Repeat steps 5 and 6.							

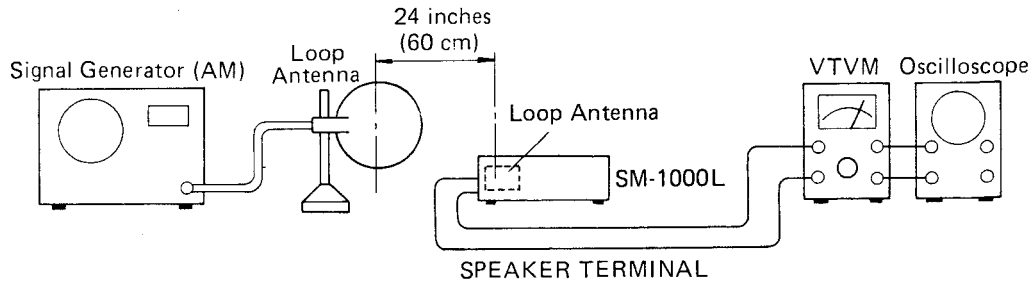


Figure 20

FM ADJUSTMENT

Test equipments/Tools required

1. Distortion meter
2. Signal generator
3. Oscilloscope
4. VTVM
5. FM dummy antenna (75 ohms)
6. Dummy load resistor
7. Network
8. Adjusting screwdriver
9. Adjusting bar

Step	Adjusting Circuit	Connection		SG Frequency	Position Tuning Dial	Adjust-ment	VTVM
		Input	Output				
1	OSC (Frequency coverage)	Connect FM signal generator to FM antenna terminal.	Connect VTVM to Output terminal.	87.5 MHz	F. Min.	L001	Maximum
2				108.0 MHz	F. Max.	C018	
Repeat steps 1 and 2.							
3	RF (Tracking)	Connect FM signal generator to FM antenna terminal.	Connect VTVM to Output terminal.	88 MHz	Tune to 88 MHz Signal	T001	Maximum
4				108 MHz	Tone to 108 MHz signal	C016 VT Trim	
Repeat steps 3 and 4.							

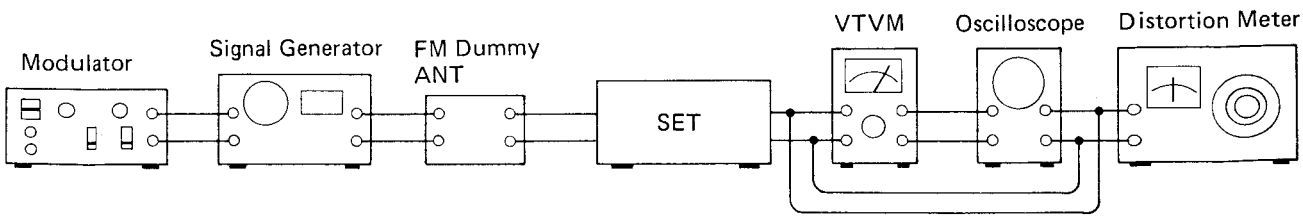


Figure 21

CAUTION:

When realigning the FM Receiving Frequency, the highest end of the frequendy range should not be more than 108.0 MHz and the lowest end of the frequency range should not be less than 87.5 MHz, in order to comply with FTZ regulations in West Germany.

FM DISTORTION ADJUSTMENT

Band	Signal Generator Frequency	Connection		Display Frequency	Adjustment	Remarks
		Input	Output			
FM	98 MHz 60 dB	Connect Signal generator to FM Antenna Terminal. Connect the modulator to signal generator.	Connect VTVM oscilloscope and distortion meter to speaker terminal.	98 MHz	T101	Distortion Minimum

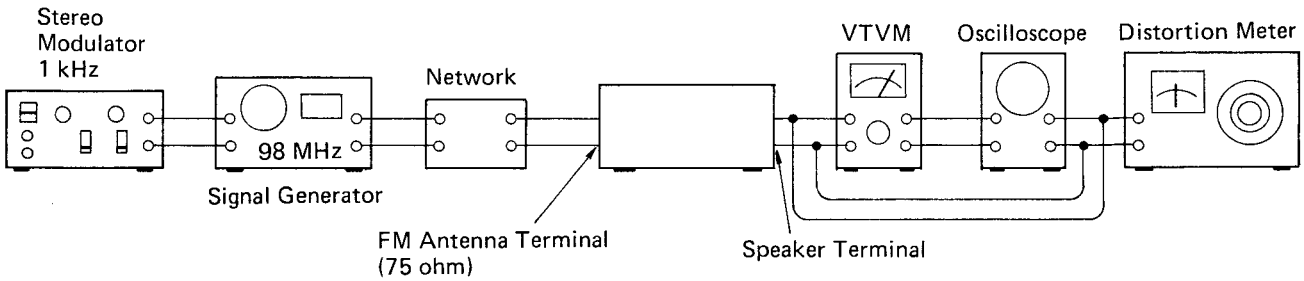


Figure 22

FM MPX ADJUSTMENT

Test Equipn ents/Tools required

1. Frequency counter
2. Resistor 4.7K ohm

Pilot signal adjustment	Connect a frequency counter to the TP with 4.7K ohm Resistor, and adjust the R204 for 38 kHz reading counter with no-signal input.

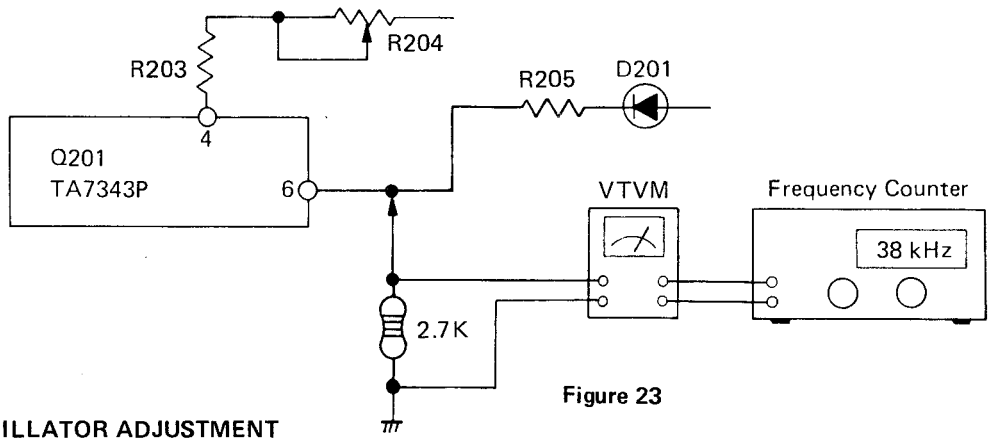


Figure 23

BIAS OSCILLATOR ADJUSTMENT

Bias OSC Adjustment	Set the unit to recording mode by using a blank tape and connect the frequency counter to L801. Adjust L801 to obtain 85 ±0.5 kHz on the counter.

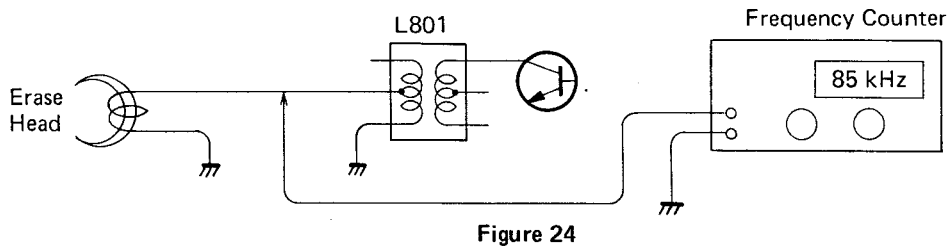


Figure 24

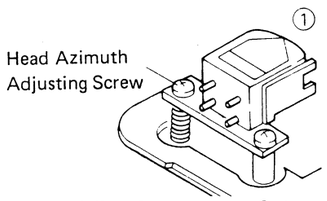
CASSETTE DECK ADJUSTMENT PROCEDURES

No.	Item	Reference Value	Test Tape	SW TAPE	SW NR	Adjustment Point	Test Point	Input Frequency	Remarks
1	Head Azimuth Adjustment	Max.	MTT-114	NOR	OUT	Head Azimuth adjustment screw	TP3, TP4 (Dolby OUT)	Play mode	After adjustment apply a lock paint on the screw.
2	Playback Sensitivity Adjustment	580mV	MTT-150	NOR	OUT	R617 R618	TP3, TP4	Play mode	
3	Bias Adjustment	5.5mV		CrO_2	OUT	R801 R802	TP1, TP2 TP5 (GND)		
4-a	Rec/Play Sensitivity Adjustment	580mV Confirmation		NOR	OUT		TP3, TP4	400 Hz	Input:
4-b		580mV	AC212	NOR	OUT	R655 R656	TP3, TP4	400 Hz	Repeat adjustment to read 580mV on VTVM in Rec and Play modes.
	Measurement Condition	Power Supply TE: 220V ∿, 50 Hz, TU 240V ∿, 50 Hz • Input: 0 dB = 1V rms • Test Point Load Impedance: No Load							

TEST EQUIPMENTS

1. VTVM (Vacuum Tube Voltmeter)
2. Signal Generator
3. Resistance Attenuator
4. Screwdriver
5. Test Tapes:
   MTT-114 (10 kHz)
   MTT-150 (400 Hz)
   AC-212 (Normal Tape)

RECOAD/PLAYBACK HEAD ADJUSTMENT



Adjust for Maximum Output.

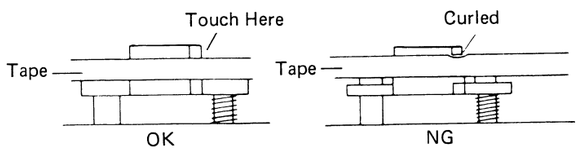


Figure 25

ERASE HEAD HEIGHT ADJUSTMENT

1. Temporarily mount the erase head so that it will be even by eye measurement.
2. Set in PLAY position with setting a mirror cassette tape, MC-09C.
3. Adjust the height adjusting screw so that the upper edge of the tape will touch at the upper tape guide of the erase head.
4. Confirm whether the upper edge of the tape is not Curled.
5. Apply a lock point on the adjusting screw.

P.S. When the mirror cassette is not available, please remodel a normal tape, type C-90 as shown below.

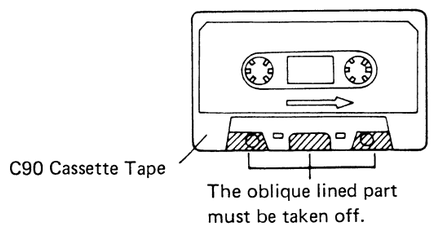


Figure 26

(Playback Sensitivity Adjustment)

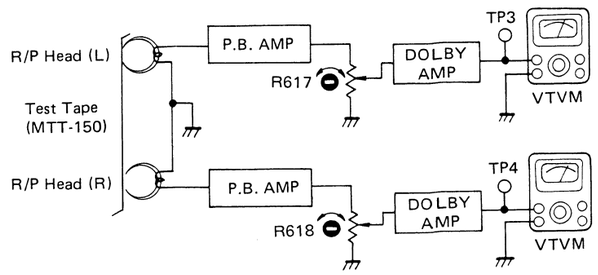


Figure 27

(Bias Adjustment)

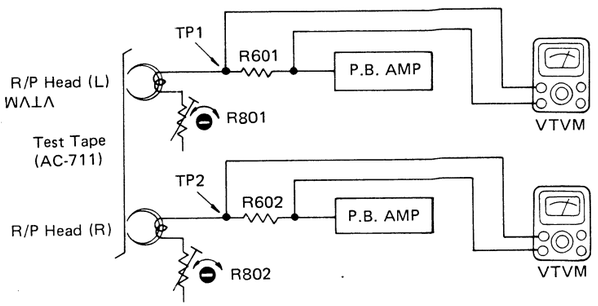


Figure 28

(REC/PLA/Sensitivity Adjustment)

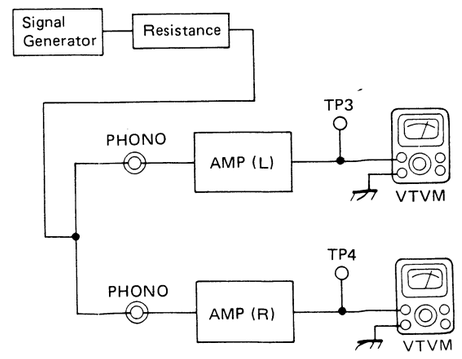
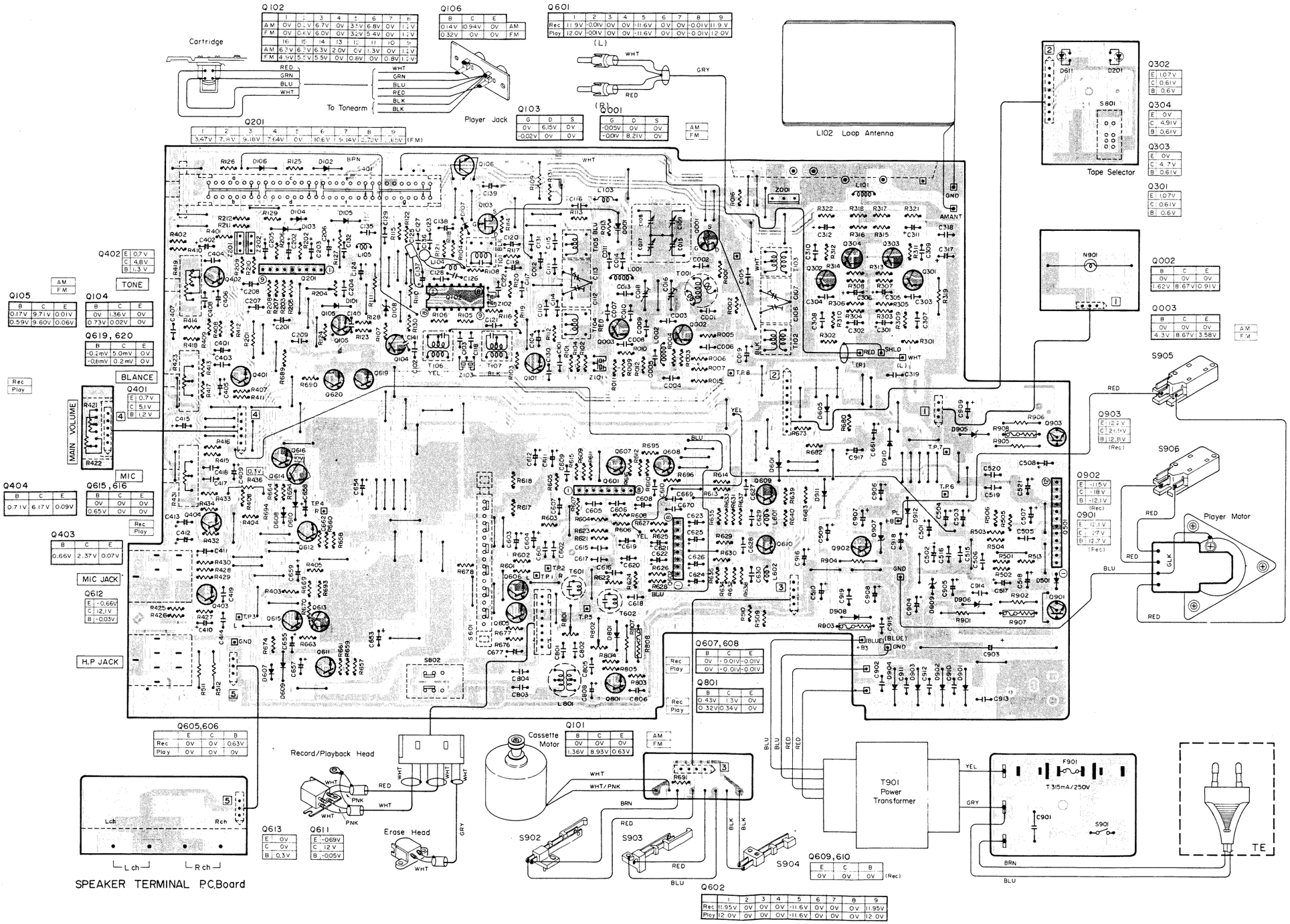


Figure 29

TE

6. ELECTRICAL PARTS LOCATIONS



Q102

	1	2	3	4	5	6	7	8
AM	0V	0.1V	6.7V	0V	3.1V	6.8V	0V	1.2V
FM	0V	0.4V	6.0V	0V	3.2V	5.4V	0V	1.2V
	16	15	14	13	12	11	10	9
AM	6.3V	6.2V	6.3V	2.0V	0V	1.3V	0V	1.2V
FM	4.9V	5.2V	5.5V	0V	0.8V	0V	0.8V	1.2V

Q106

B	C	E	
0.14V	10.94V	0V	AM
0.32V	0V	0V	FM

Q601

	1	2	3	4	5	6	7	8	9
Rec	11.9V	-0.01V	0V	0V	-11.6V	0V	0V	-0.01V	11.9V
Play	12.0V	-0.01V	0V	0V	-11.6V	0V	0V	-0.01V	12.0V

Q103

G	D	S
0V	6.15V	0V
-0.02V	0V	0V

Q801

G	D	S
-0.05V	0V	0V
-0.09V	8.21V	0V

Q201

1	2	3	4	5	6	7	8	9
3.47V	7.41V	9.18V	7.64V	0V	10.6V	9.14V	2.72V	1.65V (FM)

Q302

E	1.07V
C	0.61V
B	0.6V

Q304

E	0V
C	4.91V
B	0.61V

Q303

E	0V
C	4.7V
B	0.61V

Q301

E	1.07V
C	0.61V
B	0.6V

Q002

B	C	E
0V	0V	0V
1.62V	8.67V	0.91V

Q003

B	C	E
0V	0V	0V
4.3V	8.67V	3.58V

Q903

E	12.2V
C	21.4V
B	12.8V
	(Rec)

Q902

E	-11.5V
C	-18V
B	-12.1V
	(Rec)

Q901

E	12.1V
C	17V
B	12.7V
	(Rec)

Q501

1	14.1V
2	14.1V
3	14.0V
4	14.0V
5	14.1V
6	0V
7	14.1V
8	1.7V
9	0V
10	8V
11	1.7V
12	14.1V
	(Rec)

Q402

E	0.7V
C	4.8V
B	1.3V

Q105

B	C	E	
0.17V	9.71V	0.01V	AM
0.59V	9.60V	0.06V	FM

Q104

B	C	E
0V	1.36V	0V
0.73V	0.02V	0V

Q619, 620

B	C	E
-0.2mV	5.0mV	0V
-0.6mV	0.2mV	0V

Q401

E	0.7V
C	5.1V
B	1.2V

Q404

B	C	E
0.71V	6.17V	0.09V

Q615, 616

B	C	E
0V	0V	0V
0.65V	0V	0V

Q403

B	C	E
0.66V	2.37V	0.07V

Q612

E	-0.66V
C	12.1V
B	-0.03V

Q605, 606

	E	C	B
Rec	0V	0V	0.63V
Play	0V	0V	0V

Q613

E	0V
C	0V
B	0.3V

Q611

E	-0.69V
C	12V
B	-0.05V

Q607, 608

B	C	E
0V	-0.01V	-0.01V
0V	-0.01V	-0.01V

Q801

B	C	E
0.43V	1.3V	0V
0.32V	0.34V	0V

Q101

B	C	E	
0V	0V	0V	AM
1.36V	8.93V	0.63V	FM

Q609, 610

E	C	B
0V	0V	0V

(Rec)

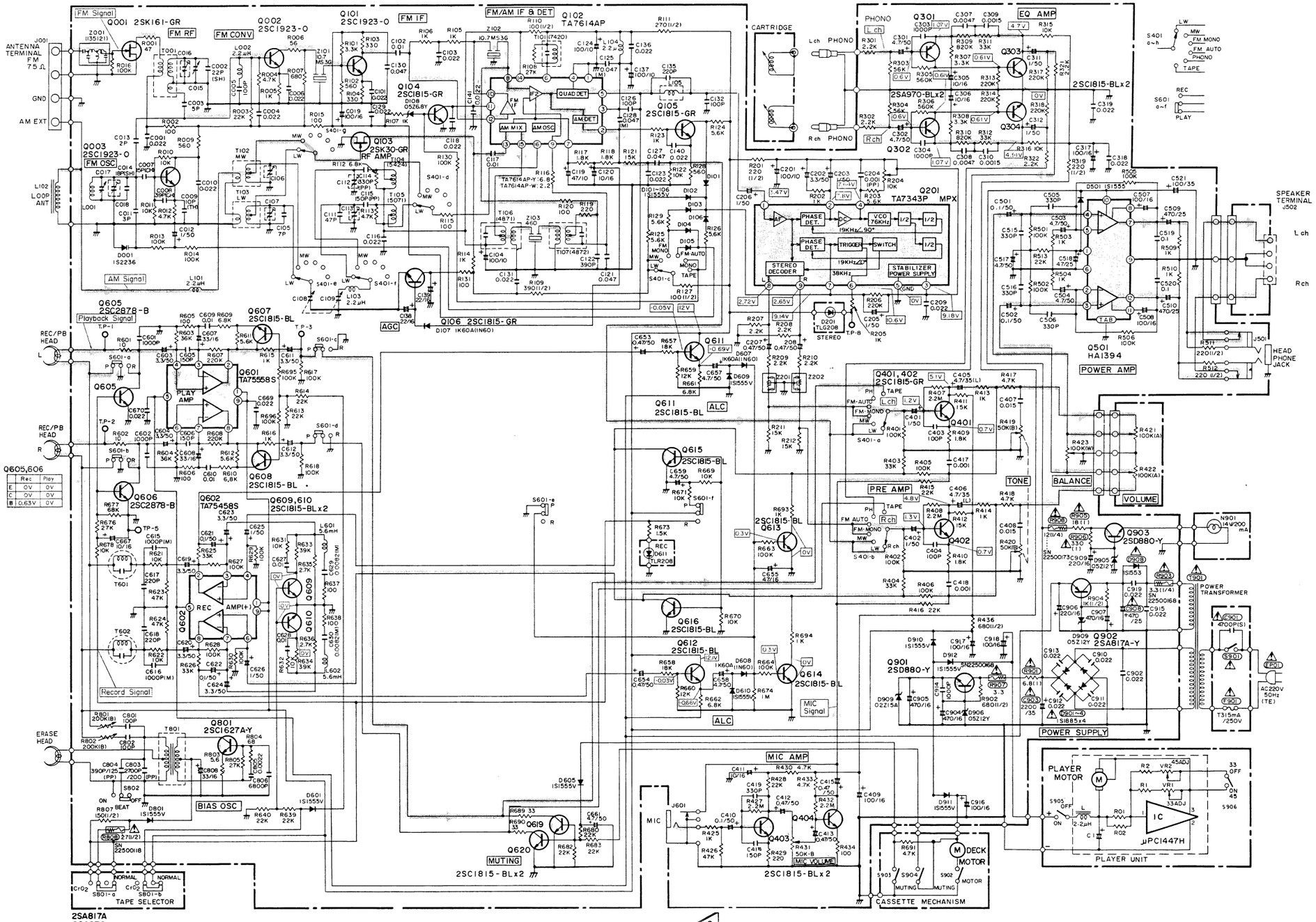
Q602

	1	2	3	4	5	6	7	8	9
Rec	11.95V	0V	0V	0V	-11.6V	0V	0V	0V	11.95V
Play	12.0V	0V	0V	0V	-11.6V	0V	0V	0V	12.0V

Figure 30

TE

7. SCHEMATIC DIAGRAM



Position

S401 : Function Switch . . . . . LW
a ~ g
S601 : Record/Playback Switch . . Play
a ~ f
S801 : Tape Selector Switch . . . . Normal
a-b
S802 : Beat Cut Switch . . . . . OFF
S901 : Power Switch . . . . . OFF
S902 : Motor Switch (Leaf) . . . . OFF
S903 : Muting Switch (Leaf) . . . . OFF
S904 : Muting Switch (Leaf) . . . . OFF
S905 : Player Switch (Micro) . . . OFF
S906 : Speed Slector
(Micro)(33/45) 33

2SA817A
2SA970
2SC1627A
2SC1815
2SC1923
2SC2878

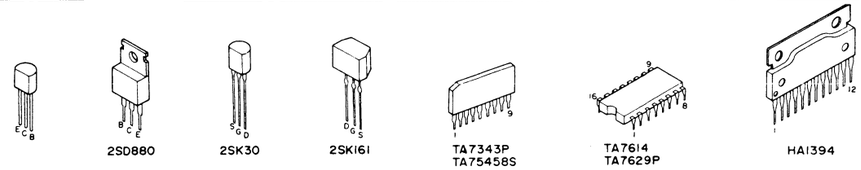
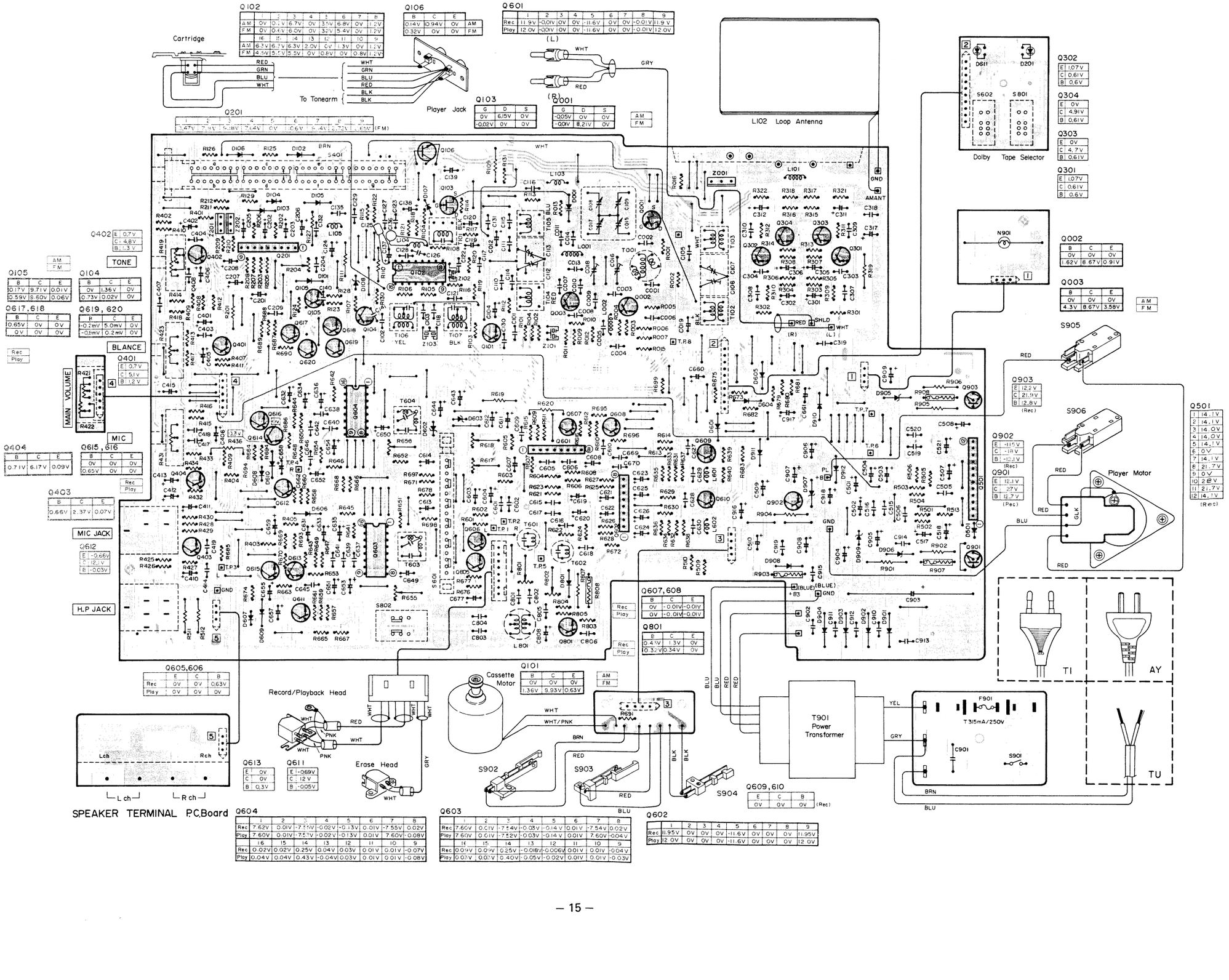


Figure 31

CAUTION:
The ⚠ mark, the symbol No. circled with rectangle in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replace only with types identical to those in the original circuit or specified in the parts list.

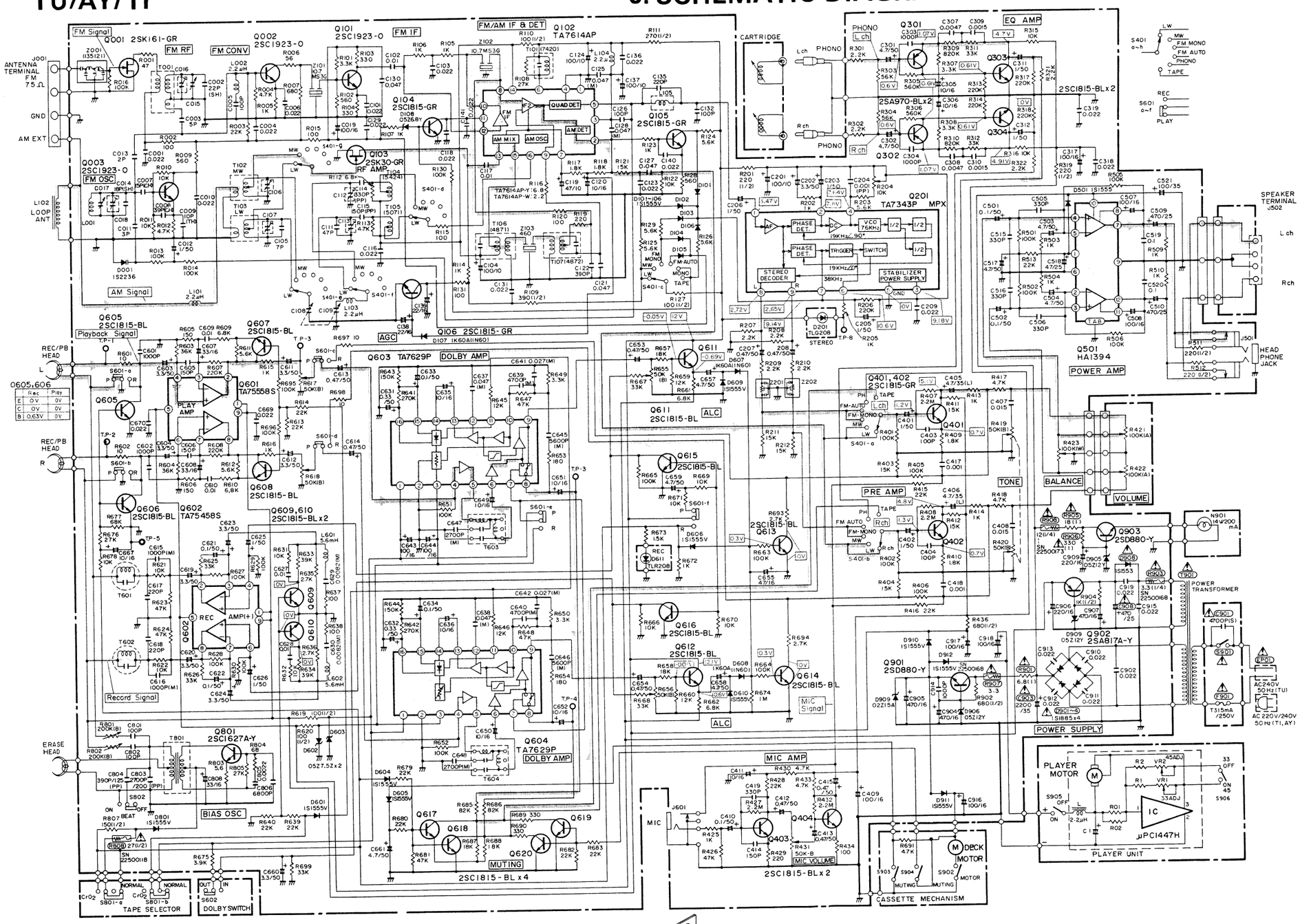
TU/AY/TI

8. ELECTRICAL PARTS LOCATIONS



TU/AY/TI

9. SCHEMATIC DIAGRAM



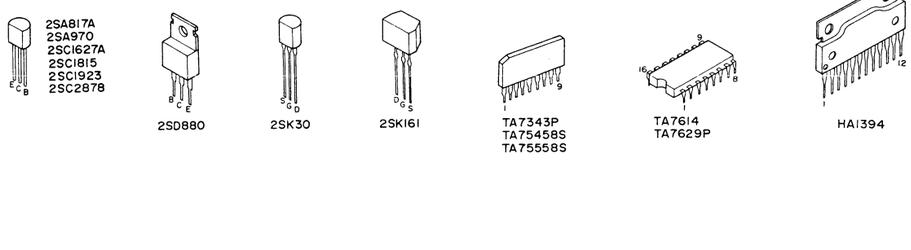


Figure 33

CAUTION:
The ⚠ mark, the symbol No. circled with rectangle in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replace only with types identical to those in the original circuit or specified in the parts list.

Q102

	1	2	3	4	5	6	7	8
AM	0V	0.1V	6.7V	0V	3.1V	6.8V	0V	11.1V
FM	0V	0.4V	6.0V	0V	3.2V	5.4V	0V	11.1V
	16	15	14	13	12	11	10	9
AM	6.7V	6.3V	1.6V	2.0V	0V	1.3V	0V	11.1V
FM	4.3V	5.1V	1.5V	0V	0.1V	0V	0.8V	11.1V

Q001

G	D	S
-0.05V	0V	0V
-0.01V	8.21V	0V

Q002

B	C	E
1.62V	8.67V	0.91V

Q101

B	C	E
0V	0V	0V
1.36V	8.93V	0.63V

Q103

G	D	S
0V	5.10V	0V
0.02V	0V	0V

Q003

B	C	E
0V	0V	0V
4.3V	8.67V	3.58V

Q104

B	C	E
0V	1.36V	0V
0.73V	0.02V	0V

Q106

B	C	E
0.14V	0.94V	0V
0.32V	0V	0V

Q105

B	C	E
0.17V	9.71V	0.01V
0.59V	9.60V	0.06V

Q501

	1	2	3	4	5	6	7	8	9	10	11	12
Rec	14.1V	14.1V	14.0V	14.0V	14.1V	0V	14.1V	21.7V	0V	28V	21.7V	14.1V

Q601

	1	2	3	4	5	6	7	8	9
Rec	11.9V	0.00V	0V	0V	-11.6V	0V	0V	-0.01V	11.9V
Play	12.0V	0.00V	0V	0V	-11.6V	0V	0V	-0.01V	12.0V

Q602

	1	2	3	4	5	6	7	8	9
Rec	11.95V	0V	0V	0V	-11.6V	0V	0V	0V	11.95V
Play	12.0V	0V	0V	0V	-11.6V	0V	0V	0V	12.0V

Q607,608

B	C	E
0V	-0.01V	-0.01V
0V	-0.01V	-0.01V

Q615,616

B	C	E
0V	0V	0V
0.65V	0V	0V

Q617,618

B	C	E
0.65V	0V	0V
0V	0V	0V

Q619,620

B	C	E
-0.2mV	5.0mV	0V
-0.8mV	0.2mV	0V

Q801

B	C	E
0.43V	1.3V	0V
0.32V	0.34V	0V

Q603

	1	2	3	4	5	6	7	8
Rec	7.60V	0.01V	-7.14V	-0.03V	-0.14V	0.01V	-7.54V	0.02V
Play	7.60V	0.01V	-7.52V	-0.03V	-0.14V	0.01V	7.60V	-0.04V
	16	15	14	13	12	11	10	9
Rec	0.01V	0.09V	0.25V	-0.018V	-0.005V	0.01V	0.01V	-0.04V
Play	0.02V	0.03V	0.40V	-0.05V	-0.02V	0.01V	0.01V	-0.03V

Q604

	1	2	3	4	5	6	7	8
Rec	7.62V	0.01V	-7.55V	-0.02V	-0.1 V	0.01V	-7.55V	0.02V
Play	7.60V	0.01V	-7.53V	-0.02V	-0.1 V	0.01V	7.60V	-0.08V
	16	15	14	13	12	11	10	9
Rec	0.02V	0.02V	0.25V	0.04V	0.0 V	0.01V	0.01V	-0.07V
Play	0.04V	0.04V	0.43V	-0.04V	0.0 V	0.01V	0.01V	-0.08V

Q403

B	C	E
0.66V	2.37V	1.07V

Q404

B	C	E
0.71V	6.17V	1.09V

Q901

B	C	E
12.7V	27V	12.1V

Q902

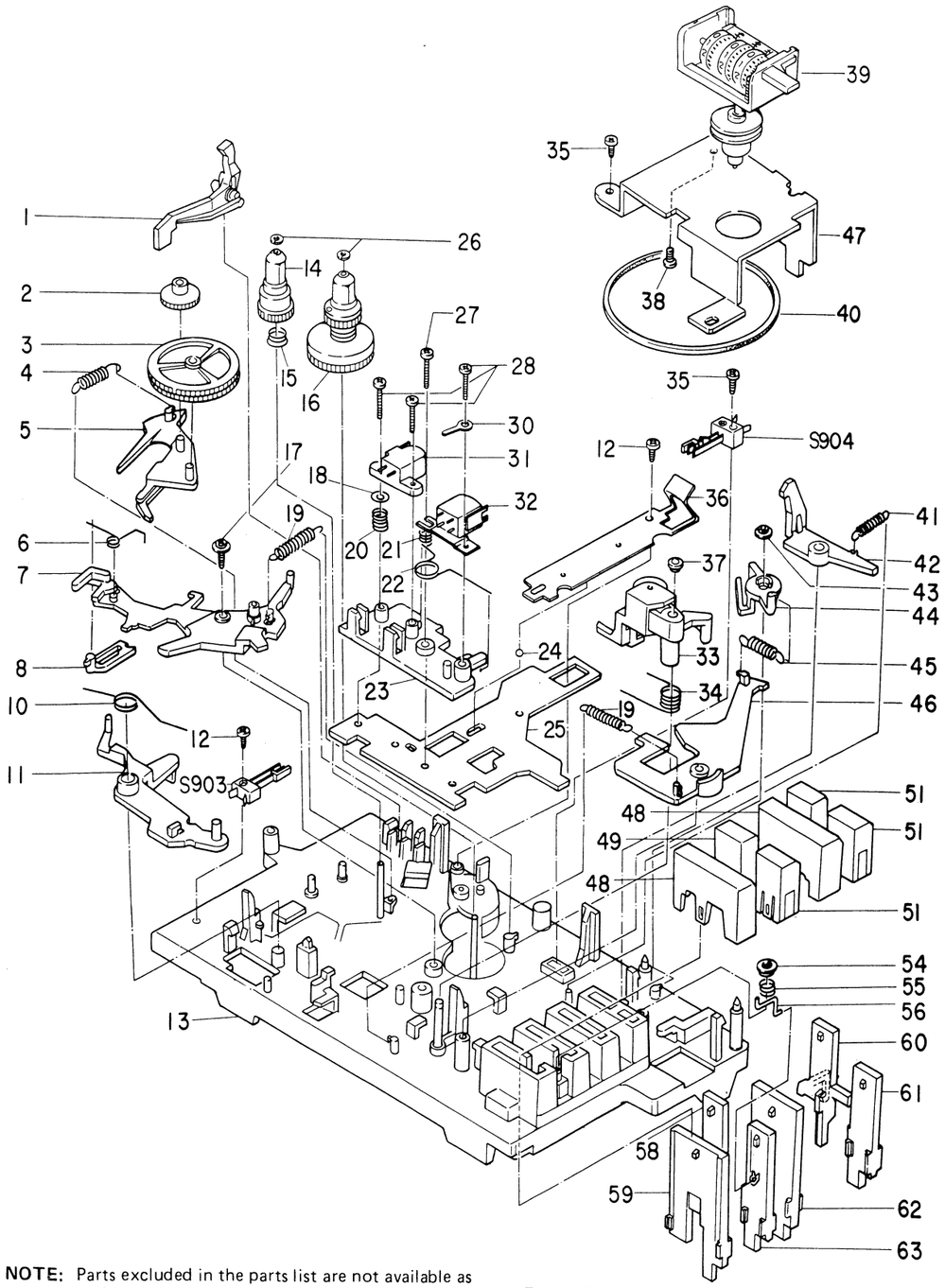
B	C	E
-12.1V	-18V	-11.5V

Q903

B	C	E
12.8V	21.9V	12.2V

	Position
S401 a～g : Function Switch	LW
S601 a～f : Record/Playback Switch	Play
S602 : Dolby Switch	OUT
S801 a-b : Tape Selector Switch	Normal
S802 : Beat Cut Switch	OFF
S901 : Power Switch	OFF
S902 : Motor Switch (Leaf)	OFF
S903 : Muting Switch (Leaf)	OFF
S904 : Muting Switch (Leaf)	OFF
S905 : Player Switch (Micro)	OFF
S906 : Speed Slector (Micro)(33/45)	33

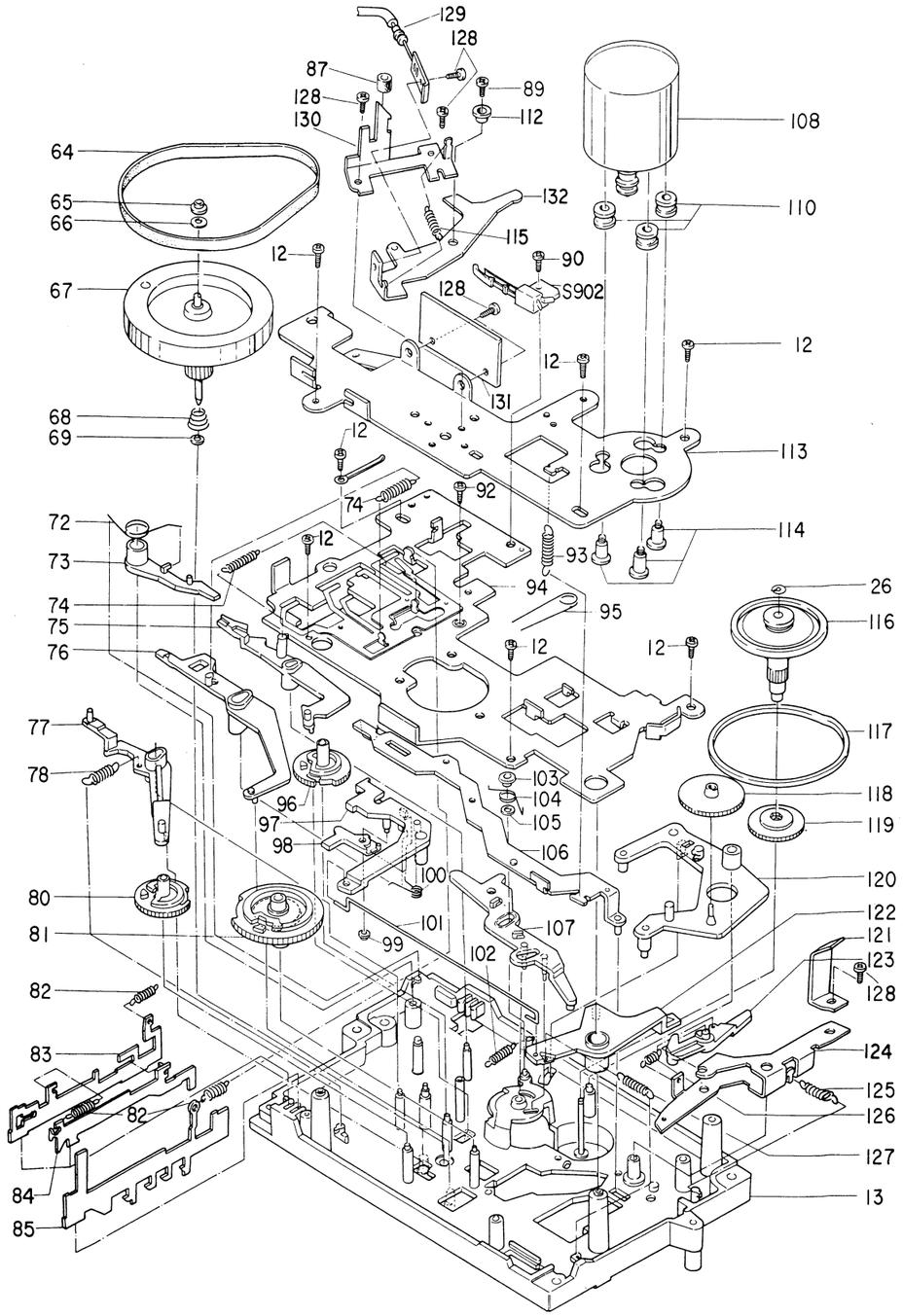
10. EXPLODED VIEW MECHANICAL (UPPER)



NOTE: Parts excluded in the parts list are not available as replacement parts.

Figure 34

11. EXPLODED VIEW MECHANICAL (LOWER)



NOTE: Parts excluded in the parts list are not available as replacement parts.

Figure 35

12. MECHANISM PARTS LIST

Symbol No.	Part No.	Description
1	25782511	Lever, Record Lock
2	25756280	Gear, Rewind
3	25756279	Gear, Fast Forward
4	25776432	Spring
5	25782509	Lever, Fast Gear
6	25778013	Spring, Rewind
7	25782507	Lever, Fast Drive
8	25783266	Slider, Rewind Drive
10	25778008	Spring, Play Lever
11	25782505	Lever, Play Drive
12	22707301	Screw, 2.6ϕ x 8mm, BID Tapping
13	25791505	Main Chassis Ass'y
14	25754402	Supply Reel, Drum
15	25777099	Spring
16	25712409	Reel Plate Ass'y, Take-up
17	22707825	Screw, 2.6ϕ x 6mm, TPAN
18	22703281	Washer, 2.6ϕ
19	25776431	Spring
20	25772579	Spring, Erase Head
21	25777056	Spring, Azimuth
22	25778007	Spring, Head Slider
23	25783265	Mount, Head
24	25757129	Steel Ball, 2ϕ
26	25766050	Washer
27	22707322	Screw, 2ϕ x 10mm, DTBID
28	22707669	Screw, 2ϕ x 12mm, DTBID
31	22218249	Head, Erase, HET-65
32	22217385	Head, Record/Playback, HRPT-95
33	25717516	Pressure Roller Ass'y
34	25778006	Spring
35	22707303	Screw, 2.6ϕ x 10mm, BID Tapping
36	25779240	Spring, Cassette Holder
37	25783260	Bushing
38	22707461	Screw, 2.6ϕ x 6mm, BID Tapping
39	25873267	Counter
40	25755529	Belt, Counter
41	25776436	Spring
42	25782512	Lever, Holder Lock
43	25783195	Bushing, Black
44	25782510	Lever, ASO Pause
45	25776418	Spring
46	25782506	Lever, Pause Drive
48	25816694	Button, PLAY/STOP
49	25816697	Button, REC
51	25816696	Button, PAUSE/FF/REW
54	25783279	Bushing
55	25777097	Spring
56	25775231	Wire, Pause Lock
58	25783271	Slider, Operation, Record
59	25783272	Slider, Operation, Stop
60	25783269	Slider, Operation, Rewind
61	25783268	Slider, Operation, Fast Forward
62	25783267	Slider, Operation, Play
63	25783270	Slider, Operation, Pause
64	25755527	Belt, Drive
65	25725340	Holder

Symbol No.	Part No.	Description
66	25766089	Washer
67	25717517	Flywheel Ass'y
68	25777108	Spring, Thrust
69	25766089	Washer, Flywheel
72	25778012	Spring, ASO Lever
73	25782521	ASO Lever
74	25776437	Spring
75	25782514	Lever, Operation Fast
76	25782513	Lever, Operation Play
77	25782515	Lever, Operation Pause
78	25776420	Spring
80	25756282	Cam Gear, Pause
81	25756281	Cam Gear, Play
82	25776417	Spring
83	25741924	Slider, Switch
84	25741925	Slider, Eject
85	25741923	Slider, Lock
87	25761354	Cushion, Arm
89	22707368	Screw, 2.6ϕ x 10mm, DTBID
90	22707426	Screw, 2ϕ x 5mm, DTBID
92	22707299	Screw, 2ϕ x 8mm, BID Tapping
93	25776445	Spring
94	25734472	Sub Plate Ass'y
95	25778014	Spring, Rewind Slider
96	25756283	Cam Gear, Fast
97	25782522	Lever, Play Stop
98	25782516	Lever, Operation Record
99	25783199	Washer
100	25778015	Spring
102	25776419	Spring
103	25783226	Bushing
104	25778011	Spring, Detector Lever
105	25766073	Washer, ASO
107	25782520	Lever, ASO Detector
108	25791506	Motor Ass'y
110	25761238	Cushion, Motor
112	25724886	Shaft, Release
114	22707429	Screw, 2.6ϕ x 1.8mm x 4.9mm
115	25776471	Spring
116	25713559	Center Pulley Ass'y
117	25755528	Belt, Center
118	25756284	Gear, Take-up
119	25756285	Gear, Fast
120	25782519	Lever, Take-up
122	25782517	Lever, Record Bias
123	25782518	Lever, Record Selector
125	25776433	Spring
126	25776435	Spring
127	25776434	Spring
128	22707366	Screw, 2.6ϕ x 6mm, DTBID
129	25791445	Wire Ass'y, Remote

13. EXPLODED VIEW PLAYER

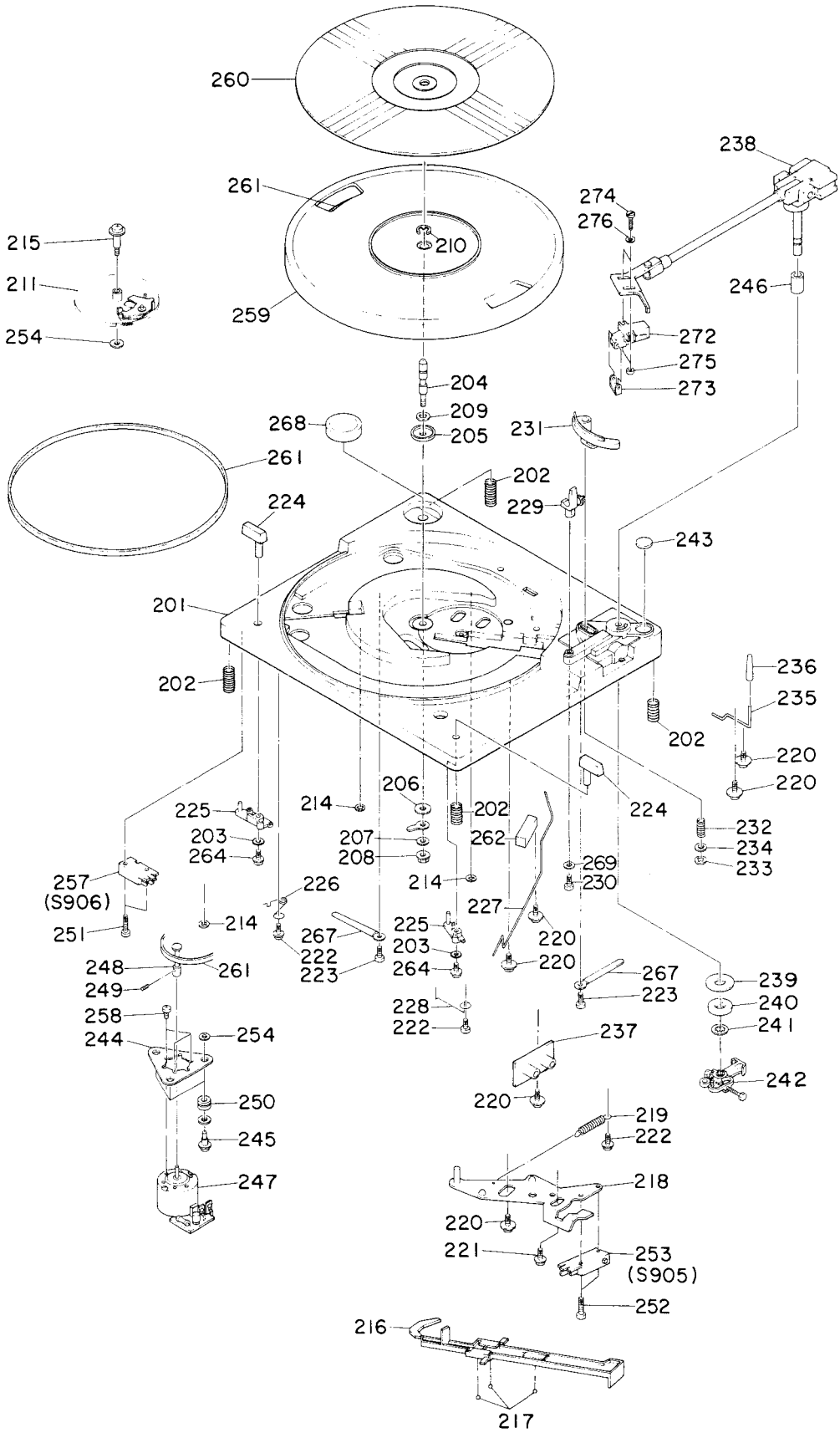


Figure 36

NOTE: Parts excluded in the parts list are not available as replacement parts.

14. PLAYER PARTS LIST

Symbol No.	Part No.	Description
201	20811398	Cabinet Board
204	20721077	Shaft, Turntable
205	20725083	Retainer, Turntable
208	20796032	Nut, 4ϕ
209	20748072	Spacer
210	22703349	E Ring
211	20721078	Main Gear Ass'y
214	20798033	CS Ring, 3ϕ
215	22707854	Screw
216	20754065	Arm Operation
217	25757104	Steel Ball, 4ϕ
218	20754066	Operation Plate Ass'y
219	25777196	Spring, Center Arm
220	22707853	Screw, 3ϕ x 8mm
221	22707919	Screw, 3ϕ x 8mm
222	22707696	Screw, 3ϕ x 8mm
223	22707388	Screw, 3ϕ x 8mm, BID Tapping
224	20754067	Knob Ass'y, Selector
225	20754068	Arm, Selector
226	25778092	Spring, Click
227	25775251	Spring, Reject
228	25775252	Spring, Return
229	20731310	Rest Ass'y, Arm
230	22707054	Screw, 3ϕ x 20mm, BID Tapping
231	20735067	Elevation Plate
232	25777197	Spring, Elevation
233	20798020	CS Ring, 4ϕ
235	20754069	Cueing Lever
236	20871381	Knob, Cueing
237	22162515	Plug Ass'y, 2P
238	20788143	Arm Ass'y
239	25766086	Washer
240	25766084	Washer, Rubber
241	22706012	CS Ring, 10ϕ
242	20754070	Arm Ass'y, Forward
243	20764056	Cue Plate
245	22707920	Screw, 3ϕ x 8mm x 8mm
247	22125832	Motor Ass'y
248	20716101	Pulley, Motor
249	22707396	Screw, 2ϕ x 2mm, Pulley
250	20881289	Cushion, Rubber, Motor
251	22707276	Screw, 3ϕ x 16mm, BID Tapping
252	22707860	Screw, 2.6ϕ x 14mm, BID
253	22195368	Micro Switch (S905)
254	22703269	Washer
257	22195368	Micro Switch (S906)
258	22701386	Screw, 2.6ϕ x 4mm, PAN
259	20723111	Turntable

Symbol No.	Part No.	Description
260	20723108	Turntable Sheet
261	20728122	Belt
264	22707377	Screw, 3ϕ x 10mm, TPAN
268	20971653	EP Adaptor
269	22703306	Wave Washer
272	22155096	Cartrige
273	20788142	Cover, Stylus
274	22707591	Screw, 2.6ϕ x 13mm
275	20796027	Nut, 2.6ϕ
276	20791077	Washer, 2.7ϕ

15. EXPLODED VIEW CABINET

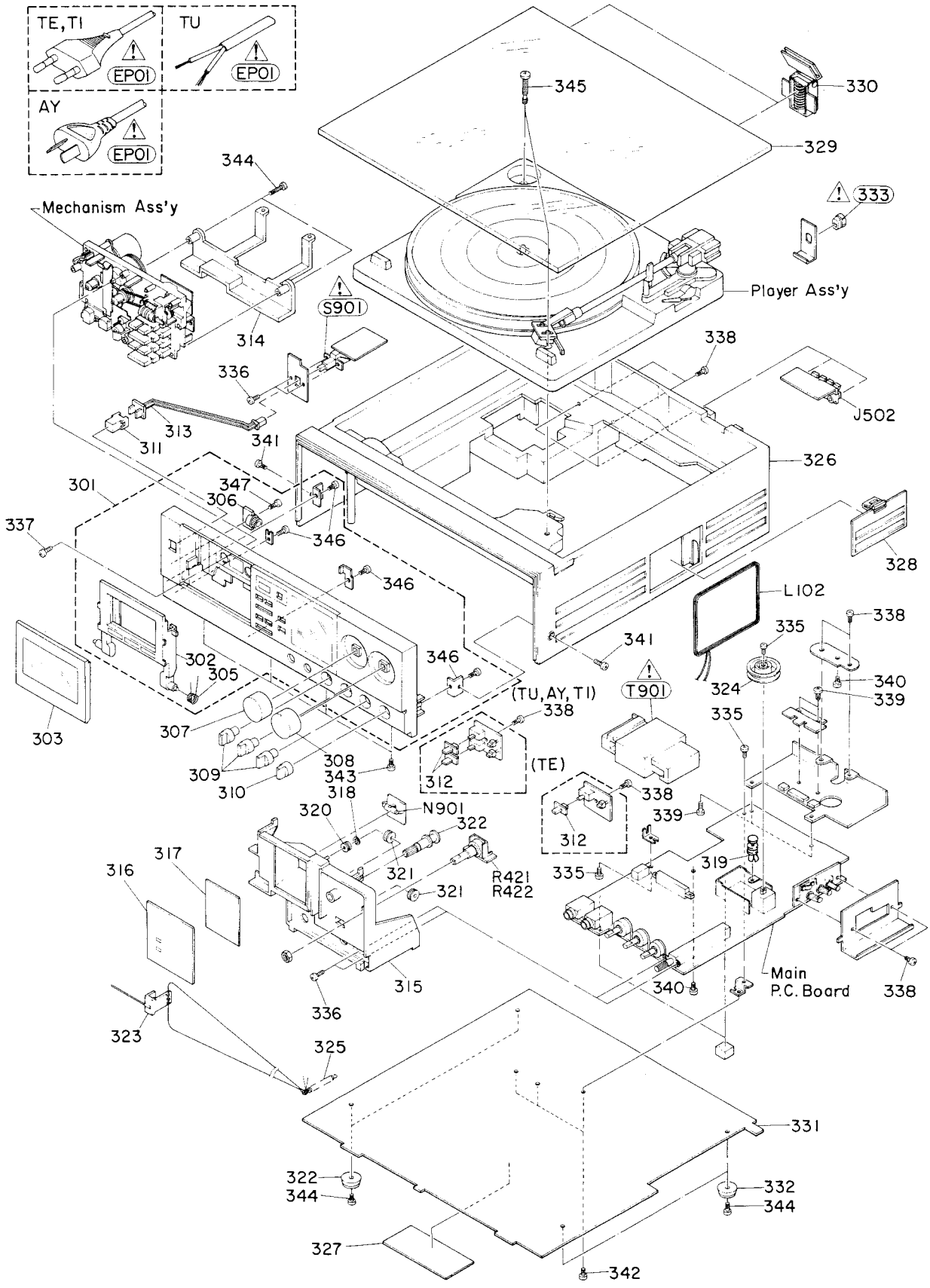


Figure 37 NOTE: Parts excluded in the parts list are not available as replacement parts.

16. CABINET PARTS LIST

CAUTION:
The ⚠ mark, the symbol No. circled with rectangle in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replace only with types identical to those in the original circuit or specified in the parts list.

Symbol No.	Part No.	Description
301	22825138	Front Panel Ass'y (TE)
301	22825103	Front Panel Ass'y (TU, AY, TI)
302	25832723	Cassette Holder Ass'y
303	25881539	Cassette Cover Ass'y
305	25775233	Spring, Cassette Up
306	25881493	Damper Ass'y
307	22826384	Knob, Tuning
308	22826385	Knob, Volume
309	22884118	Knob, Balance/Tone/ Microphone
310	25837649	Knob, Function
311	25837672	Knob, Power
312	25837783	Knob, Tape Selector (TE)
312	25837783	Knob, Tape Selector/Dolby (TU, AY, TI)
313	25830256	Joint, Power Knob
314	22837462	Support, Mechanism
315	20015338	Back Plate
316	20033173	Dial Plate
317	20847282	Defuser
318	22702125	Push Nut, 2.4ϕ
319	22742217	Pulley Ass'y
320	22742110	Pulley, 8ϕ
321	22742162	Pulley, 10ϕ
322	22743309	Tuning Shaft
323	22741399	Pointer Ass'y
324	22742293	Drum
325	25776470	Spring, Drum
326	22881174	Cabinet
327	20878043	Name Label (TE)
327	20878042	Name Label (TU, AY)
327	20878053	Name Label (TI)
328	22882022	Cover, Antenna Terminal
329	20847284	Dust Cover, Glass
330	20861109	Hinge, Dust Cover
331	20822105	Bottom Board
332	20842162	Foot
⚠ 333	25845528	Cord Bush
335	22707473	Screw, 2.6ϕ x 6mm, BID
336	22707066	Screw, 3ϕ x 6mm, BID
337	22701338	Screw, 2.6ϕ x 8mm, BID Tapping
338	22701326	Screw, 3ϕ x 8mm, BID Tapping
339	22707812	Screw, 3ϕ x 8mm, Chrome
340	22707165	Screw, 3ϕ x 10mm, BID Tapping
341	22707382	Screw, 3ϕ x 10mm, Chrome
342	22701434	Screw, 3ϕ x 10mm, TPAN
343	22707118	Screw, 3ϕ x 12mm, BID Tapping
344	22707941	Screw, 3ϕ x 16mm, TPAN Tapping
345	22707838	Screw, 5ϕ x 28mm, Special
346	22707826	Screw, 3ϕ x 10mm, DTBID
347	22707353	Screw, 3ϕ x 16mm, TPAN

PARTS LIST

CAUTION:
The ⚠ mark, the symbol No. circled with rectangle in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replace only with types identical to those in the original circuit or specified in the parts list.

Symbol No.	Part No.	Description
TRANSISTORS, IC'S & DIODES		
Q001	A6042640	Transistor, 2SK161-GR
Q002, 003	A6319020	Transistor, 2SC1923-O
Q101	A6319020	Transistor, 2SC1923-O
Q102	B0355421	IC, TA7614AP
Q103	A6048330	Transistor, 2SK30A-TM.O
Q104, 105	A6317460	Transistor, 2SC1815NEW-GR
Q106	A6317460	Transistor, 2SC1815NEW-GR (TU, AY, TI)
Q201	B0325350	IC, TA7343P
Q301, 302	A6533645	Transistor, 2SA970NEW-BL
Q401, 402	A6317460	Transistor, 2SC1815NEW-GR
Q403, 404	A6317480	Transistor, 2SC1815NEW-BL
Q501	22117067	IC, HA1394
Q601	B0350510	IC, TA75558S
Q602	B0350010	IC, TA75458S
Q603, 604	B0356150	IC, TA7629P (TU, AY, TI)
Q605, 606	A6342210	Transistor, 2SC2878-B (TE)
Q605, 606	A6317480	Transistor, 2SC1815NEW-BL(TU,AY,TI)
Q607, 608 609, 610	A6317480	Transistor, 2SC1815NEW-BL
Q611, 612	A6317460	Transistor, 2SC1815NEW-GR
Q613, 614, 615, 616	A6317480	Transistor, 2SC1815NEW-BL
Q617, 618	A6317480	Transistor, 2SC1815NEW-BL (TU, AY, TI)
Q619, 620	A6317480	Transistor, 2SC1815NEW-BL
Q801	A6314470	Transistor, 2SC1627A-Y
Q901	A6848520	Transistor, 2SD880-Y
Q902	A6531170	Transistor, 2SA817A-Y
Q903	A6848520	Transistor, 2SD880-Y
D001	A7289000	Diode, 1S2236
D101, 102, 103, 104, 105, 106	A7246703	Diode, 1S1555V
D107	22115808	Diode, 1K60A (TU, AY, TI) (IN60)
D108	A7110115	Diode, 05Z6.8Y
D201	A8606660	Diode, TLG208
D501	A7246703	Diode, 1S1555V
D601	A7246703	Diode, 1S1555V
D602, 603	A7110161	Diode, 05Z7.5Z (TU, AY, TI)
D604	A7246703	Diode, 1S1555V (TU, AY, TI)
D605	A7246703	Diode, 1S1555V
D606	A7246703	Diode, 1S1555V (TU, AY, TI)
D607, 608	22115808	Diode, 1K60A (IN60)
D609, 610	A7246703	Diode, 1S1555V
D611	A8603140	Diode, TLR208
D801	A7246703	Diode, 1S1555V
⚠ D901, 902, 903, 904	A7568500	Diode, 1S1885
D905, 906, 907	A7110411	Diode, 05Z12Y
D908	A7246601	Diode, 1S1553V
D909	A7287900	Diode, 02Z15A
D910, 911, 912	A7246703	Diode, 1S1555V
COILS & TRANSFORMERS		
L001	22295144	Coil, FM Oscillator
L002	22291082	Coil, Choke, 2.2 μH
L101	22291082	Coil, Choke, 2.2 μH
L102	22242922	Coil, Loop Antenna
L103, 104	22291082	Coil, Choke, 2.2 μH
L601, 602	22232260	Coil, Choke, 5.6mH
T001	22294422	Coil, FM RF
T101	22267420	IF Transformer, FM
T102	22242930	Coil, MW Antenna
T103	22242931	Coil, LW Antenna
T104	22245424	Coil, MW Oscillator
T105	22205071	Coil, LW Oscillator

Symbol No.	Part No.	Description
T106	22264871	IF Transformer, AM
T107	22264872	IF Transformer, AM
T108	22232261	Coil, Choke, 8.8mH
T601, 602	22153234	Filter, Bias Trap
T603, 604	22153186	Filter, Dolby (TU, AY, TI)
T801	22235217	Coil, Bias Oscillator
⚠ T901	22224133	Transformer, Power (TE, TI)
⚠ T901	22224132	Transformer, Power (TU, AY)

ELECTRICAL PARTS

S401a-g	22196075	Switch, Rotary, Function
S601a-f	22196138	Switch, Slide, Record/Playback
S602	22196139	Switch, Slide, Dolby (TU, AY, TI)
S801a-b	22196139	Switch, Slide, Tape Selector
S802	22196077	Switch, Slide, Beat Cut
⚠ S901	22195631	Switch, Push, Power
S902	22195885	Switch, Leaf, Motor
S903	22195983	Switch, Leaf, Muting
S904	22196062	Switch, Leaf, Muting
S905	22195368	Micro Switch, Player ON-OFF
S906	22195368	Micro Switch, Speed Selector
J001	22162463	Terminal, 2P, Antenna
J501	22163961	Jack, 6ϕ, Headphone
J502	22162506	Terminal, 4P, Speaker
J601	22163953	Jack, 6ϕ, Microphone
⚠ F901	22144407	Fuse, T3.15A, 250V
N901	22113585	Lamp, 14V, 200mA
Z001	22153237	Filter, FM RF
Z101, 102	22153140	Filter, Ceramic, 10.7MHz
Z103	22153168	Filter, Ceramic, 460KHz
Z201, 202	22153224	Filter, Low-pass

Symbol No.	Part No.	Description
⚠ EP01	22176286	Power Cord (TE, TI)
⚠ EP01	22176628	Power Cord (TU)
⚠ EP01	22176588	Power Cord (AY)
EP02	22165047	Fuse Holder

CAPACITORS

D = ±0.5pF, J = ±5%, K = ±10%, M = ±20%
ABBREVIATIONS: CD = Ceramic Disk, EL = Electrolytic, PP = Polypropylene, MY = Mylar, BL = Barrier Layer, PS = Polystyrene

C001	22342223	CD, 0.022mfd, 50V, Z
C002	22360154	CD, 22pF, 50V, J, SH
C003	22361509	CD, 5pF, 50V, D
C004	22342223	CD, 0.022mfd, 50V, Z
C005	22362101	CD, 100pF, 50V, K
C006	22342223	CD, 0.022mfd, 50V, Z
C007	22360132	CD, 15pF, 50V, J, CH
C008	22360137	CD, 39pF, 50V, J, CH
C009	22360314	CD, 10pF, 50V, D, TH
C010	22342223	CD, 0.022mfd, 50V, Z
C011	22361309	CD, 3pF, 50V, D
C012	22488109	EL, 1mfd, 50V
C013	22361209	CD, 2pF, 50V, D
C014	22360153	CD, 18pF, 50V, J, SH
C015, 017, 108, 109	22308564	Variable, VC-4-335-R
C016	22309194	Trimmer, Max. 10pF
C018	22309194	Trimmer, Max. 10pF
C019	22485101	EL, 100mfd, 16V
C101	22342223	CD, 0.022mfd, 50V, Z
C102	22349103	CD, 0.01mfd, 50V, K
C103	22342223	CD, 0.022mfd, 50V, Z
C104	22483101	EL, 100mfd, 10V
C105	22361709	CD, 7pF, 50V, D
C106, 107,	22309184	Trimmer, Max. 16pF x 2
C111	22362470	CD, 47pF, 50V, K
C112, 113	22309184	Trimmer, Max. 16pF x 2
C114	22321049	PP, 330pF, 50V, J
C115	22321083	PP, 150P, 50V, J
C117	22343103	CD, 0.01mfd, 50V, K
C118	22342223	CD, 0.022mfd, 50V, Z
C119	22483470	EL, 47mfd, 10V
C120	22485100	EL, 10mfd, 16V

Symbol No.	Part No.	Description
C121	22342473	CD, 0.047mfd, 50V, Z
C122	22349391	CD, 390pF, 50V, K
C123	22342223	CD, 0.022mfd, 50V, Z
C124	22483101	EL, 100mfd, 10V
C125	22342473	CD, 0.047mfd, 50V, Z
C126	22362101	CD, 100pF, 50V, K
C127	22342473	CD, 0.047mfd, 50V, Z
C128	22371473	MY, 0.047mfd, 50V, J
C129	22342223	CD, 0.022mfd, 50V, Z
C130	22342473	CD, 0.047mfd, 50V, Z
C131	22342223	CD, 0.022mfd, 50V, Z
C132	22362101	CD, 100pF, 50V, K
C133, 134	22342223	CD, 0.022mfd, 50V, Z (TE)
C135	22349221	CD, 220pF, 50V, K
C136	22342223	CD, 0.022mfd, 50V, Z
C137	22483101	EL, 100mfd, 10V
C138	22485220	EL, 22mfd, 16V (TU, AY, TI)
C139	22485220	EL, 22mfd, 16V (TU, AY, TI)
C140	22342223	CD, 0.022mfd, 50V, Z
C141	22342223	CD, 0.022mfd, 50V, Z
C201	22483101	EL, 100mfd, 10V
C202	22488339	EL, 3.3mfd, 50V
C204	22321057	PP, 0.001mfd, 50V, J
C205	22488109	EL, 1mfd, 50V
C206	22488109	EL, 1mfd, 50V
C207, 208	22488478	EL, 0.47mfd, 50V
C209	22342223	CD, 0.022mfd, 50V, Z
C301, 302	22488479	EL, 4.7mfd, 50V
C303, 304	22349102	CD, 1000pF, 50V, K
C305, 306	22485100	EL, 10mfd, 16V
C307, 308	22349472	CD, 0.0047mfd, 50V, K
C309, 310	22360534	BL, 0.0015mfd, 25V, K
C311, 312	22488109	EL, 1mfd, 50V
C317	22485101	EL, 100mfd, 16V
C318, 319	22342223	CD, 0.022mfd, 50V, Z
C401, 402	22488109	EL, 1mfd, 50V
C403, 404	22362101	CD, 100pF, 50V, K
C405, 406	22467479	EL, 4.7mfd, 35V, Low Noise
C407, 408	22360546	BL, 0.015mfd, 25V, K
C409	22485101	EL, 100mfd, 16V
C410	22488108	EL, 0.1mfd, 50V
C411	22485100	EL, 10mfd, 16V
C412	22488478	EL, 0.47mfd, 50V
C413	22488478	EL, 0.47mfd, 50V
C414	22349151	CD, 150pF, 50V, K
C415	22488478	EL, 0.47mfd, 50V

Symbol No.	Part No.	Description
C417, 418	22349102	CD, 0.001mfd, 50V, K
C419	22362331	CD, 330pF, 50V, K
C501, 502	22488108	EL, 0.1mfd, 50V
C503, 504	22488479	EL, 4.7mfd, 50V
C505, 506	22362331	CD, 330pF, 50V, K
C507, 508	22485101	EL, 100mfd, 16V
C509, 510	22486471	EL, 470mfd, 25V
C515, 516	22362331	CD, 330pF, 50V, K
C517	22488479	EL, 4.7mfd, 50V
C518	22486470	EL, 47mfd, 25V
C519, 520	22360333	BL, 0.1mfd, 25V, M
C521	22487101	EL, 100mfd, 35V
C601, 602	22349102	CD, 1000pF, 50V, K
C603, 604	22488339	EL, 3.3mfd, 50V
C605, 606	22349151	CD, 150pF, 50V, K
C607, 608	22485330	EL, 33mfd, 16V
C609, 610	22349103	CD, 0.01mfd, 50V, Z
C611, 612	22488339	EL, 3.3mfd, 50V
C613, 614	22488478	EL, 0.47mfd, 50V (TU, AY, TI)
C615, 616	22371102	MY, 1000pF, 50V, J
C617, 618	22349221	CD, 220pF, 50V, K
C619, 620	22488339	EL, 3.3mfd, 50V
C621, 622	22488108	EL, 0.1mfd, 50V
C623, 624	22488339	EL, 3.3mfd, 50V
C625, 626	22488109	EL, 1mfd, 50V
C627, 628	22349103	CD, 0.01mfd, 50V, K
C629, 630	22371822	MY, 0.0082mfd, 50V, J
C631, 632	22488338	EL, 0.33mfd, 50V (TU, AY, TI)
C633, 634	22488108	EL, 0.1mfd, 50V (TU, AY, TI)
C635, 636	22485100	EL, 10mfd, 16V (TU, AY, TI)
C637, 638	22371473	MY, 0.047mfd, 50V, J (TU, AY, TI)
C639, 640	22371472	MY, 4700pF, 50V, J (TU, AY, TI)
C641, 642	22371273	MY, 0.027mfd, 50V, J (TU, AY, TI)
C643, 644	22485101	EL, 100mfd, 16V (TU, AY, TI)
C645, 646	22371562	MY, 5600pF, 50V, J (TU, AY, TI)
C647, 648	22371272	MY, 2700pF, 50V, J (TU, AY, TI)
C649, 650	22485100	EL, 10mfd, 16V (TU, AY, TI)
C651, 652	22485100	EL, 10mfd, 16V (TU, AY, TI)

Symbol No.	Part No.	Description
C653, 654	22488478	EL, 0.47mfd, 50V
C655	22488470	EL, 47mfd, 50V
C657, 658	22488479	EL, 4.7mfd, 50V
C659	22488479	EL, 4.7mfd, 50V
C660	22488339	EL, 3,3mfd, 50V (TU, AY, TI)
C661	22488479	EL, 4.7mfd, 50V
C667	22485100	EL, 10mfd, 16V
C669, 670	22342223	CD, 0.022mfd, 50V, Z
C801, 802	22362101	CD, 100pF, 50V, K
C803	22380099	PS, 2700pF, 200V, K
C804	22380122	PS, 390pF, 125V, K
C805	22342223	CD, 0.022mfd, 50V, Z
C806	22360542	BL, 6800pF, 25V, K
C808	22485330	EL, 33mfd, 16V
⚠ C901	22340150	CD, 4700pF, 400V, K
C902	22342223	CD, 0.022mfd, 50V, Z
⚠ C903	22410004	EL, 2200mfd, 35V
C904, 905	22485471	EL, 470mfd, 16V
C906	22485221	EL, 220mfd, 16V
C907	22485221	EL, 470mfd, 16V
C908	22486471	EL, 470mfd, 25V
C909	22485221	EL, 220mfd, 16V
C910, 911	22342223	CD, 0.022mfd, 50V, Z
C912, 913	22342223	CD, 0.022mfd, 50V, Z
C914	22349102	CD, 1000pF, 50V, K
C915	22342223	CD, 0.022mfd, 50V, Z
C916	22485101	EL, 100mfd, 16V
C917	22485101	EL, 100mfd, 16V
C918	22485101	EL, 100mfd, 16V
C919	22342223	CD, 0.022mfd, 50V, Z

RESISTORS

All resistors are carbon film, 1/4W, ±5% unless otherwise noted. 1K ohm = 1000 ohm, 1M ohm = 1000000 ohm

R001	22584470	47 ohm, 1/6W
R002	22584101	100 ohm, 1/6W
R003	22584223	22K ohm, 1/6W
R004	22584472	4.7K ohm, 1/6W
R005	22584102	1K ohm, 1/6W
R006	22584560	56 ohm, 1/6W
R007	22584681	680 ohm, 1/6W
R009	22584561	560 ohm, 1/6W
R010	22584103	10K ohm, 1/6W
R011	22584103	10K ohm, 1/6W
R012	22584472	4.7K ohm, 1/6W
R013	22584104	100K ohm, 1/6W
R014	22584104	100K ohm, 1/6W
R015	22584101	100 ohm, 1/6W
R016	22584104	100K ohm, 1/6W
R101	22555332	3.3K ohm
R102	22555561	560 ohm
R103	22555331	330 ohm
R104	22555331	330 ohm
R105	22555102	1K ohm
R106	22555102	1K ohm
R107	22555102	1K ohm
R108	22555273	27K ohm
R109	22547391	390 ohm, 1/2W
R110	22547101	100 ohm, 1/2W
R111	22547271	270 ohm, 1/2W
R112	22555682	6.8K ohm
R113	22555472	4.7K ohm
R114	22555102	1K ohm
R115	22555101	100 ohm
R116	22555689	6.8 ohm (TA7614P-Y)
R116	22555229	2.2 ohm (TA7614P-W)
R117	22555182	1.8K ohm
R118	22555182	1.8K ohm
R119	22555221	220 ohm
R120	22555101	100 ohm
R121	22555153	15K ohm
R122	22555103	10K ohm
R123	22555102	1K ohm
R124	22555562	5.6K ohm
R125	22555562	5.6K ohm
R126	22555562	5.6K ohm
R127	22547101	100 ohm, 1/2W
R128	22555561	560 ohm
R129	22555562	5.6K ohm
R130	22555104	100K ohm
R131	22555101	100 ohm (TU, AY, TI)
R201	22547221	220 ohm, 1/2W
R202	22555102	1K ohm
R203	22555562	5.6K ohm
R204	22658599	10K ohm, B, Semi-fixed Variable
R205	22555222	2.2K ohm
R206	22555224	220K ohm
R207, 208	22555222	2.2K ohm
R209, 210	22555222	2.2K ohm
R211, 212	22555153	15K ohm
R301, 302	22555222	2.2K ohm
R303, 304	22555563	56K ohm

Symbol No.	Part No.	Description
R305, 306	22555564	560K ohm
R307, 308	22555332	3.3K ohm
R309, 310	22555824	820K ohm
R311, 312	22555333	33K ohm
R313, 314	22555224	220K ohm
R315, 316	22555103	10K ohm
R317, 318	22555224	220K ohm
R319	22547221	220 ohm, 1/2W
R321, 322	22555222	2.2K ohm
R401, 402	22555104	100K ohm
R403, 404	22555333	33K ohm (TE)
R403, 404	22555153	15K ohm (TU, AY, TI)
R405, 406	22555104	100K ohm
R407, 408	22555225	2.2M ohm
R409, 410	22555182	1.8K ohm
R411, 412	22555153	15K ohm
R413, 414	22555102	1K ohm
R415, 416	22555223	22K ohm
R417, 418	22555472	4.7K ohm
R419, 420	22620050	50K ohm, B, Variable, Tone
R421, 422	22627024	100K ohm, A, Variable, Volume
R423	22620046	100K ohm, W, Variable, Balance
R425	22555102	1K ohm
R426	22555473	47K ohm
R427	22555225	2.2M ohm
R428	22555223	22K ohm
R429	22555221	220 ohm
R430	22555472	4.7K ohm
R431	22620045	50K ohm, B, Variable, Microphone
R432	22555225	2.2M ohm
R433	22555472	4.7K ohm
R434	22555101	100 ohm
R436	22547681	680 ohm, 1/2W
R501, 502	22555104	100K ohm
R503, 504	22555102	1K ohm
R505, 506	22555104	100K ohm
R509, 510	22555102	1K ohm
R511, 512	22547221	220 ohm, 1/2W
R513	22555223	22K ohm
R601, 602	22555100	10 ohm
R603, 604	22555563	56K ohm
R605, 606	22555101	100 ohm (TE)
R605, 606	22555151	150 ohm (TU, AY, TI)
R607, 608	22555224	220K ohm
R609, 610	22555682	6.8K ohm
R611, 612	22555562	5.6K ohm
R613, 614	22555223	22K ohm

Symbol No.	Part No.	Description
R615, 616	22555102	1K ohm
R617, 618	22555104	100K ohm (TE)
R617, 618	22658658	50K ohm, B, Semi-fixed Variable (TU, AY, TI)
R619, 620	22547101	100 ohm, 1/2W (TU, AY, TI)
R621, 622	22555103	10K ohm
R623, 624	22555473	47K ohm
R625, 626	22555333	33K ohm
R627, 628	22555104	100K ohm
R629, 630	22555104	100K ohm
R631, 632	22555103	10K ohm
R633, 634	22555393	39K ohm
R635, 636	22555272	2.7K ohm
R637, 638	22555101	100 ohm
R639, 640	22555223	22K ohm
R641, 642	22555274	270K ohm (TU, AY, TI)
R643, 644	22555154	150K ohm (TU, AY, TI)
R645, 646	22555123	12K ohm (TU, AY, TI)
R647, 648	22555473	47K ohm (TU, AY, TI)
R649, 650	22555332	3.3K ohm (TU, AY, TI)
R651, 652	22555104	100K ohm (TU, AY, TI)
R653, 654	22555181	180 ohm (TU, AY, TI)
R655, 656	22658658	50K ohm, B, Semi-fixed Variable (TU, AY, TI)
R657, 658	22555183	18K ohm
R659, 660	22555123	12K ohm
R661, 662	22555682	6.8K ohm
R663, 664	22555104	100K ohm
R665, 666	22555103	10K ohm (TU, AY, TI)
R667, 668	22555333	33K ohm (TU, AY, TI)
R669, 670	22555103	10K ohm
R671	22555103	10K ohm
R672	22555102	1K ohm (TU, AY, TI)
R673	22555152	1.5K ohm
R674	22555105	1M ohm
R675	22555392	3.9K ohm (TU, AY, TI)
R676	22555273	27K ohm
R677	22555683	68K ohm
R678	22555103	10K ohm
R679	22555223	22K ohm (TU, AY, TI)
R680	22555223	22K ohm
R681	22555473	47K ohm (TU, AY, TI)
R682, 683	22555223	22K ohm
R685, 686	22555823	82K ohm (TU, AY, TI)
R687, 688	22555183	18K ohm (TU, AY, TI)
R689, 690	22555101	100 ohm (TE)
R689, 690	22555331	330 ohm (TU, AY, TI)
R691	22555472	4.7K ohm
R693, 694	22555102	1K ohm (TE)
R693, 694	22555272	2.7K ohm (TU, AY, TI)
R695, 696	22555104	100K ohm
R697, 698	22555100	10 ohm (TU, AY, TI)
R699	22555333	33K ohm (TU, AY, TI)

Symbol No.	Part No.	Description
R801, 802	22658605	200K ohm, B, Semi-fixed Variable
R803	22555569	5.6 ohm
R804	22555680	68 ohm
R805	22555273	27K ohm
R807	22547151	150 ohm, 1/2W
⚠ R808	22500118	27 ohm, Fusible
⚠ R901	22570352	6.8 ohm, 1W, Metal Film
R902	22547681	680 ohm, 1/2W
⚠ R903	22500168	3.3 ohm, Fusible
R904	22547102	1K ohm, 1/2W
⚠ R905	22570253	18 ohm, 1W, Metal Film
⚠ R906	22570268	330 ohm, 1W, Metal Oxide Film
⚠ R907	22500168	3.3 ohm, Fusible
⚠ R908	22500173	12 ohm, Fusible

ACCESSORIES

AC01	22124701	Feeder Ass'y, Antenna
AC02	22903478	Owner's Manual (TE)
AC02	22903457	Owner's Manual (TU, AY, TI)

Symbol No.	Part No.	Description